Regional histories of New South Wales

**Department of Climate Change,
Energy, the Environment and Water**

Acknowledgement of Country

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We pay our respects to Elders past, present and emerging.

This resource may contain images or names of deceased persons in photographs or historical content.

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Preface

Almost 30 years ago the Heritage Office, a previous iteration of our organisation, published these regional histories to assist with the assessment of environmental heritage of New South Wales.

In this edited version the information is still factual as originally published. The edits made in 2024 are minor and focused on enhancing accessibility. We have updated language to reflect contemporary standards and replaced words that may now be considered derogatory with more widely accepted terminology. Chapter maps have been updated to reflect changes to council names and amalgamations as a result of the 2016 NSW local government reforms.

It is important to acknowledge the evolving understanding of Australia's history since the original publication of these regional histories. Today we wholeheartedly recognise the rich history of Aboriginal people in New South Wales conveyed over millennia through language, stories, dances, myths and legends. We advocate truth telling about our colonial past and recognise the deep cultural knowledge of Aboriginal peoples in caring for Country and contributing to culture and development of New South Wales. While this recognition is in the many statements of significance for Aboriginal places and objects, and increasingly in environmental heritage listings, it's crucial to note that the histories of the many Aboriginal groups of New South Wales are not documented within this publication.

Over the last few decades, New South Wales has undergone demographic changes that are not captured in this edited version, including overseas and domestic migration patterns in metropolitan areas and regional New South Wales.

However, this resource continues to serve NSW government agencies, local councils, heritage consultants, community organisations and property owners involved in managing the State's heritage. Moreover, it serves as an educational resource for the wider community.

The interactive map of the NSW State Heritage Inventory contains a spatial layer titled 'NSW Historic Regions' and each of the 17 regions identified in this publication is available for viewing.
www.hms.heritage.nsw.gov.au/App/Item/SearchHeritageItems

Heritage NSW

Department of Climate Change, Energy, the Environment and Water

2024

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Introduction

This publication is derived from the draft *Historical guidelines* prepared for the New South Wales State Heritage Inventory Project in 1990.

The draft *Historical guidelines* identified a set of broad themes of the history of New South Wales and 17 regions of the state based on geography and historical development since 1788. The bulk of those draft guidelines was devoted to a set of regional histories and bibliographies designed to assist the process of heritage analysis in New South Wales.

Subsequently, the *Historical guidelines* have been recast. Discussion of the themes and their use will be incorporated in the *New South Wales heritage manual* (a key resource at the time, but no longer in print). The regional histories are published because it is considered that they are unique in providing a consistent historical geographical overview of the State of New South Wales in its present form.

This publication was prepared by the NSW Government office of the day known as the Heritage Office which came under the Department of Urban Affairs and Planning. It is important to acknowledge that the texts of chapters 1 and 2 and the regional histories (chapter 3) were written by the consultants for the draft *Historical guidelines*, R. Ian Jack, Associate Professor in History at the University of Sydney and Dennis Jeans, then Associate Professor in Geography at the University of Sydney. Minor editing of the regional histories to take account of public and professional comments received was undertaken in 1994 by consultant historian Deborah Edward. The original text by Jack and Jeans has been retained fundamentally as written but the format and context of this publication are significantly different from that of the draft *Historical guidelines* originally prepared by those consultants.

In addition, it is emphasised that the interpretations placed on the history of the state in these regional histories were not necessarily endorsed or recommended by the NSW Government department and office of the day nor today's. This is not a judgement on their quality but a statement that history, like any discipline, is subject to professional interpretation. This document should not be used to restrict interpretations made by any other professional historian or historical geographer undertaking professional analysis for heritage work. (See chapter 1, 'History and heritage' for a discussion of this issue by Jack and Jeans.)

Of all the regions, inclusion of the Sydney region in this publication was the one which generated most professional discussion and a special preamble for that section (Region 1) has been prepared by Dr Shirley Fitzgerald, a member of the Heritage Council's History Advisory Panel at the time. Basically, the description of the Sydney region has been edited and retained in this publication to maintain the logic and completeness of Jack and Jeans' geographic division of the state.

5-A
5-D 5-E 5-B
5-C
6-A 5-F
7-E 6-H 6-C 6-B 5
16-J 16-K 5-G
16-E 6-D 5-I 5-H
7-D 6-G 6-F 6 5-J
16-B 7-C 7 7-F 6-E 5-K
5-L
7-A 7-B 7-K 7-H 7-G 4
16-D 16 16-F 3-A 4-A
7-J 7-I 3 3-D
16-C 9-A 8-D 3-B 3-C 2-C 2-D
2-B 2 2-E
9-B 8-B 8 8-E 1-D 2-A
16-A 9-C 8-C 8-G 1-E
16-G 8-H 1-C 1
9-E 9-D 8-A 8-F 1-B
16-I 12-B 1-A
12-F 12-G 10-D 15-D
16-H 12-C 15-C
12-A 12-E 10-A 10 10-C 15-B
12-D 12 12-I 10 15
13-B 12-H 15-A
13-A 13 12-K 12-J 13-G 10-B
13-C 13-D 13-E 11-A 14-B
13-F 11 14
14-A

Refer to Map 2 for
inner Sydney LGAs

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Lord Howe Island (inset)

Map 1   Historical regions of New South Wales (key map for the regional histories)

1	SYDNEY	1-A Wingecarribee, 1-B Wollondilly, 1-C Blue Mountains, 1-D Hawkesbury, 1-E Central Coast
2	LOWER HUNTER	2-A Lake Macquarie, 2-B Cessnock, 2-C Maitland, 2-D Port Stephens, 2-E Newcastle
3	UPPER HUNTER	3-A Upper Hunter, 3-B Muswellbrook, 3-C Singleton, 3-D Dungog
4	MANNING RIVER	4-A Mid-Coast
5	NORTH COAST	5-A Tweed, 5-B Byron, 5-C Ballina, 5-D Kyogle, 5-E Lismore, 5-F Richmond Valley, 5-G Clarence Valley, 5-H Coffs Harbour, 5-I Bellingen, 5-J Nambucca Valley, 5-K Kempsey, 5-L Port Macquarie-Hastings
6	NEW ENGLAND	6-A Tenterfield, 6-B Glen Innes Severn, 6-C Inverell, 6-D Armidale Regional, 6-E Walcha, 6-F Uralla, 6-G Tamworth Regional, 6-H Gwydir
7	DARLING PLAINS	7-A Bogan, 7-B Warren, 7-C Coonamble, 7-D Narrabri, 7-E Moree Plains, 7-F Gunnedah, 7-G Liverpool Plains, 7-H Warrumbungle, 7-I Dubbo Regional, 7-J Narromine, 7-K Gilgandra
8	CENTRAL TABLELAND	8-A Cowra, 8-B Cabonne, 8-C Orange, 8-D Mid-Western Regional, 8-E Lithgow City, 8-F Oberon, 8-G Bathurst Regional, 8-H Blayney
9	LACHLAN	9-A Lachlan, 9-B Parkes, 9-C Forbes, 9-D Weddin, 9-E Bland
10	SOUTHERN TABLELAND	10-A Yass Valley, 10-B Queanbeyan-Palerang, 10-C Goulburn Mulwaree, 10-D Upper Lachlan Shire
11	MONARO	11-A Snowy Monaro Regional
12	MURRUMBIDGEE	12-A Murrumbidgee, 12-B Griffith, 12-C Leeton, 12-D Narrandera, 12-E Coolamon, 12-F Temora, 12-G Hilltops, 12-H Cootamundra-Gundagai, 12-I Junee, 12-J Wagga Wagga, 12-K Lockhart
13	MURRAY	13-A Murray River, 13-B Edward River, 13-C Berrigan, 13-D Federation, 13-E Greater Hume Shire, 13-F Albury City, 13-G Snowy Valleys
14	SOUTH COAST	14-A Bega Valley, 14-B Eurobodalla
15	ILLAWARRA	15-A Shoalhaven, 15-B Kiama, 15-C Shellharbour, 15-D Wollongong
16	WESTERN PLAINS	16-A Wentworth, 16-B Unincorporated, 16-C Broken Hill, 16-D Central Darling, 16-E Bourke, 16-F Cobar, 16-G Carrathool, 16-H Hay, 16-I Balranald, 16-J Brewarrina, 16-K Walgett
17	LORD HOWE ISLAND	17-A Lord Howe Island

The map labels (clockwise and interior):

HORNSBY
THE HILLS SHIRE
NORTHERN BEACHES
BLACKTOWN
PENRITH
FAIRFIELD
LIVERPOOL
CAMDEN
CAMPBELLTOWN
SUTHERLAND SHIRE

Numbered areas: 20, 1, 14, 16, 17, 15, 18, 19, 13, 12, 11, 10, 9, 8, 7, 2, 3, 5, 6, 4

1 CITY OF PARRAMATTA
2 CUMBERLAND
3 CANTERBURY-BANKSTOWN
4 GEORGES RIVER
5 BAYSIDE
6 RANDWICK
7 WAVERLEY
8 WOOLLAHRA
9 SYDNEY
10 INNER WEST
11 BURWOOD
12 STRATHFIELD
13 CANADA BAY
14 RYDE
15 HUNTERS HILL
16 LANE COVE
17 WILLOUGHBY
18 NORTH SYDNEY
19 MOSMAN
20 KU-RING-GAI

Map 2   Inner Sydney local government areas
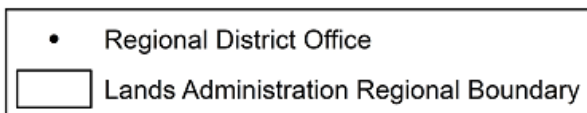
Map 3   Administrative boundaries under the Crown Lands Act
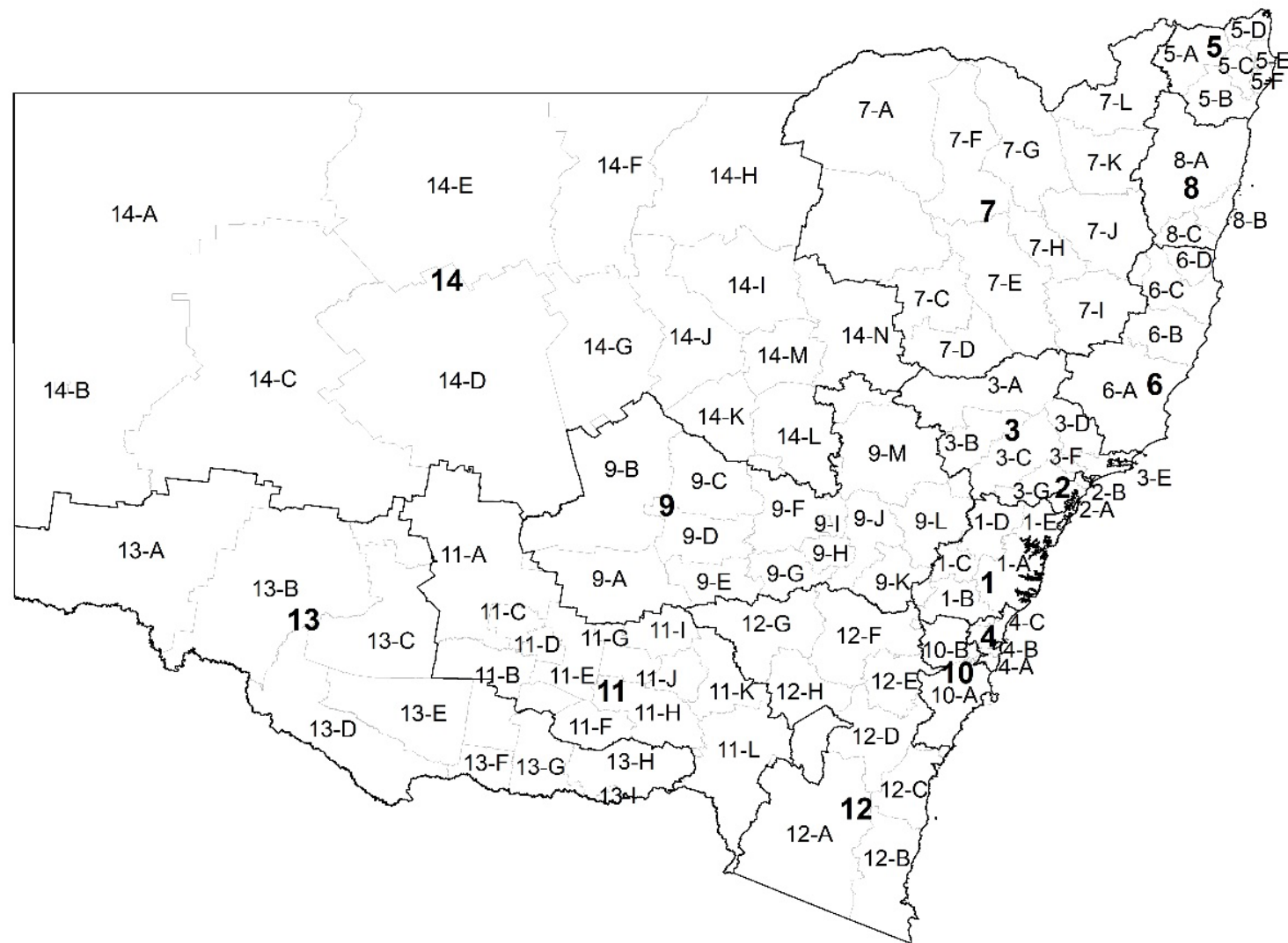
Map 4   **Statistical divisions of New South Wales**

1	GREATER SYDNEY	1-A Metro Sydney, 1-B Wollondilly, 1-C Blue Mountains, 1-D Hawkesbury, 1-E Central Coast
2	NEWCASTLE AND LAKE MACQUARIE	2-A Lake Macquarie, 2-B Newcastle
3	HUNTER VALLEY EXC NEWCASTLE	3-A Upper Hunter, 3-B Muswellbrook, 3-C Singleton, 3-D Dungog, 3-E Port Stephens, 3-F Maitland, 3-G Cessnock
4	ILLAWARRA	4-A Kiama, 4-B Shellharbour, 4-C Wollongong
5	Richmond - Tweed	5-A Kyogle, 5-B Richmond Valley, 5-C Lismore, 5-D Tweed, 5-E Byron, 5-F Ballina
6	MID NORTH COAST	6-A Mid-Coast, 6-B Port Macquarie-Hastings, 6-C Kempsey, 6-D Nambucca Valley
7	NEW ENGLAND AND NORTH WEST	7-A Moree Plains, 7-A Narrabri, 7-C Gunnedah, 7-D Liverpool Plains, 7-E Tamworth Regional, 7-F Gwydir, 7-G Inverell, 7-H Uralla, 7-I Walcha, 7-J Armidale Regional, 7-K Glen Innes Severn, 7-L Tenterfield
8	COFFS HARBOUR - GRAFTON	8-A Clarence Valley, 8-B Coffs Harbour, 8-C Bellingen
9	CENTRAL WEST	9-A Bland, 9-B Lachlan, 9-C Parkes, 9-D Forbes, 9-E Weddin, 9-F Cabonne, 9-G Cowra, 9-H Blayney, 9-I Orange, 9-J Bathurst Regional, 9-K Oberon, 9-L Lithgow City, 9-M Mid-Western Regional
10	SOUTHERN HIGHLANDS AND SHOALHAVEN	10-A Shoalhaven, 10-B Wingecarribee
11	RIVERINA	11-A Carrathool, 11-B Murrumbidgee, 11-C Griffith, 11-D Leeton, 11-E Narrandera, 11-F Lockhart, 11-G Coolamon, 11-H Wagga Wagga, 11-I Temora, 11-J Junee, 11-K Cootamundra-Gundagai, 11-L Snowy Valleys
12	CAPITAL REGION	12-A Snowy Monaro Regional, 12-B Bega Valley, 12-C Eurobodalla, 12-D Queanbeyan-Palerang, 12-E Goulburn Mulwaree, 12-F Upper Lachlan Shire, 12-G Hilltops, 12-H Yass Valley
13	MURRAY	13-A Wentworth, 13-B Balranald, 13-C Hay, 13-D Murray River, 13-E Edward River, 13-F Berrigan, 13-G Federation, 13-H Greater Hume Shire, 13-I Albury City
14	FAR WEST AND ORANA	14-A Unincorporated, 14-B Broken Hill, 14-C Central Darling, 14-D Cobar, 14-E Bourke, 14-F Brewarrina, 14-G Bogan, 14-H Walgett, 14-I Coonamble, 14-J Warren, 14-K Narromine, 14-L Dubbo Regional, 14-M Gilgandra, 14-N Warrumbungle
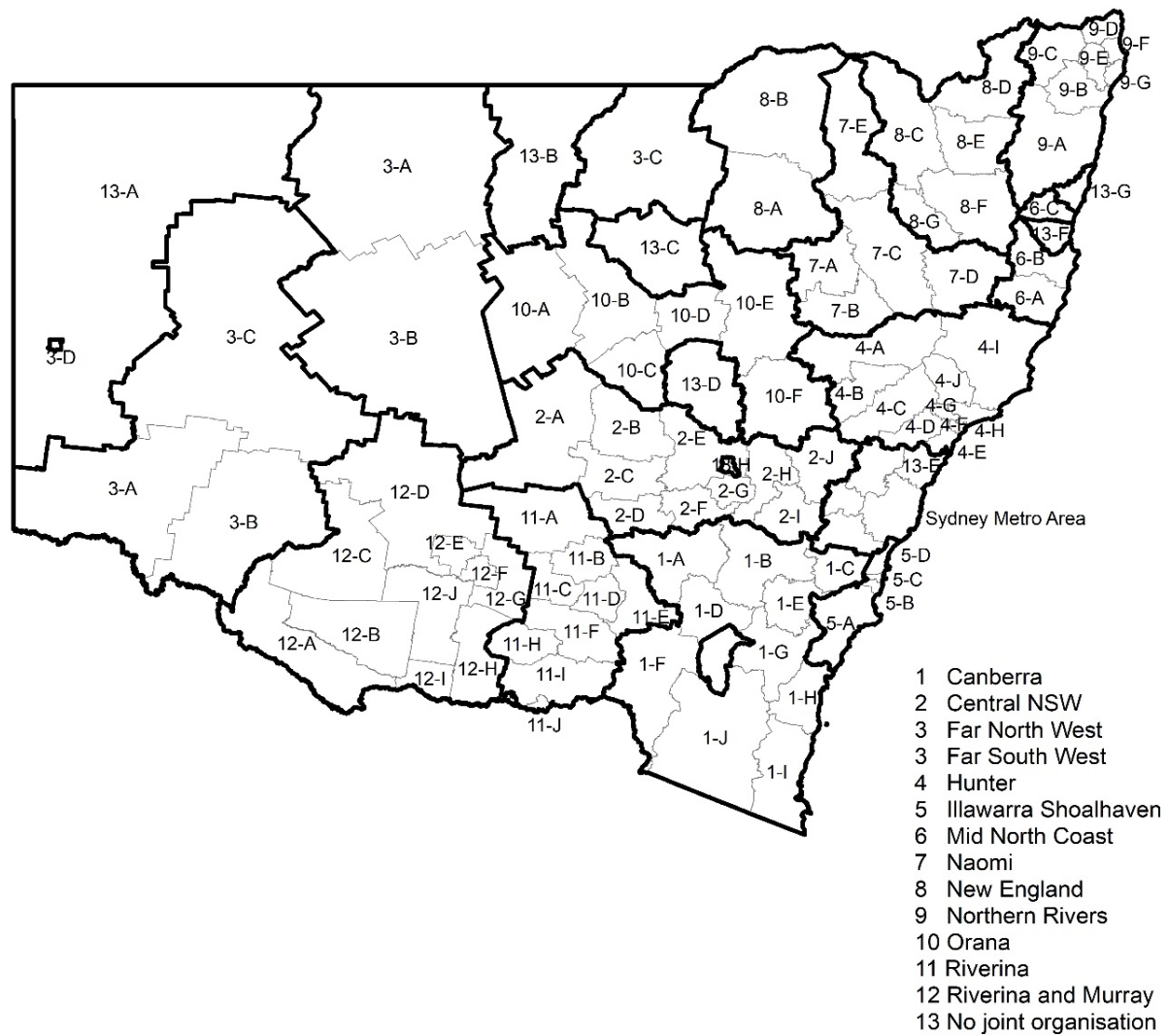
Map 5   **Regional organisations of non-metropolitan local councils**

Labels on map:

13-A, 3-A, 13-B, 3-C, 8-B, 7-E, 8-C, 8-D, 9-D, 9-F, 9-C, 9-E, 9-B, 9-G, 8-E, 9-A, 13-G, 8-A, 6-C, 13-F, 3-C, 3-B, 8-G, 8-F, 6-B, 7-C, 7-D, 6-A, 3-D, 10-A, 10-B, 10-D, 10-E, 7-A, 7-B, 13-C, 4-A, 4-I, 10-C, 13-D, 10-F, 4-B, 4-J, 4-C, 4-G, 4-D, 4-F, 4-H, 2-A, 2-B, 2-E, 2-H, 2-J, 4-E, 2-C, 2-H, 13-E, 2-G, 12-D, 2-D, 2-F, 2-I, Sydney Metro Area, 11-A, 5-D, 5-C, 12-E, 11-B, 1-A, 1-B, 1-C, 5-B, 12-C, 12-F, 11-C, 11-D, 1-E, 5-A, 12-J, 12-G, 11-E, 1-D, 12-B, 12-A, 11-H, 11-F, 1-F, 1-G, 1-H, 12-I, 12-H, 11-I, 11-J, 1-J, 1-I

Legend:

1   Canberra
2   Central NSW
3   Far North West
3   Far South West
4   Hunter
5   Illawarra Shoalhaven
6   Mid North Coast
7   Naomi
8   New England
9   Northern Rivers
10 Orana
11 Riverina
12 Riverina and Murray
13 No joint organisation

1	**CANBERRA**	1-A Hilltops, 1-B Upper Lachlan Shire, 1-C Wingecarribee, 1-D Yass Valley, 1-E Goulburn Mulwaree, 1-F Snowy Valleys, 1-G Queanbeyan-Palerang, 1-H Eurobodalla, 1-I Bega Valley, 1-J Snowy Monaro
2	**CENTRAL NSW**	2-A Lachlan, 2-B Parkes, 2-C Forbes, 2-D Weddin, 2-E Cabonne, 2-F Cowra, 2-G Blayney, 2-H Bathurst Regional, 2-I Oberon, 2-J Lithgow City
3	FAR WEST	3-A Bourke, 3-A Wentworth, 3-B Balranald, 3-B Cobar, 3-C Central Darling, 3-C Walgett, 3-D Broken Hill
4	**HUNTER**	4-A Upper Hunter, 4-B Muswellbrook, 4-C Singleton, 4-D Cessnock, 4-E Lake Macquarie, 4-F Newcastle, 4-G Maitland, 4-H Port Stephens, 4-I Mid-Coast, 4-J Dungog
5	**ILLAWARRA SHOALHAVEN**	5-A Shoalhaven, 5-B Kiama, 5-C Shellharbour, 5-D Wollongong
6	**MID-NORTH COAST**	6-A Port Macquarie-Hastings**,** 6-B Kempsey**,** 6-C Bellingen
7	**NAOMI**	7-A Gunnedah, 7-B Liverpool Plains, 7-C Tamworth Regional, 7-D Walcha, 7-E Gwydir
8	**NEW ENGLAND**	8-A Narrabri, 8-B Moree Plains, 8-C Inverell, 8-D Tenterfield, 8-E Glen Innes Severn, 8-F Armidale Regional, 8-G Uralla
9	**NORTHERN RIVERS**	9-A Clarence Valley, 9-B Richmond Valley, 9-C Kyogle, 9-D Tweed, 9-E Lismore, 9-F Byron, 9-G Ballina
10	**ORANA**	10-A Bogan, 10-B Warren, 10-C Narromine, 10-D Gilgandra, 10-E Warrumbungle, 10-F Mid-Western
11	**RIVERINA**	11-A Bland**,** 1-B Temora**,** 11-C Coolamon**,** 11-D Junee**,** 11-E Cootamundra-Gundagai**,** 11-F Wagga Wagga**,** 11-H Lockhart**,** 11-I Greater Hume Shire**,** 11-J Albury City
12	**RIVERINA AND MURRAY**	12-A Murray River, 12-B Edward River, 12-C Hay, 12-D Carrathool, 12-E Griffith, 12-F Leeton, 12-G Narrandera, 12-H Federation, 12-I Berrigan, 12-J Murrumbidgee
13	**NO JOINT ORGANISATION**	13-A Unincorporated, 13-B Brewarrina, 13-C Coonamble, 13-D Dubbo Regional, 13-E Central Coast, 13-F Nambucca Valley, 13-G Coffs Harbour, 13-H Orange
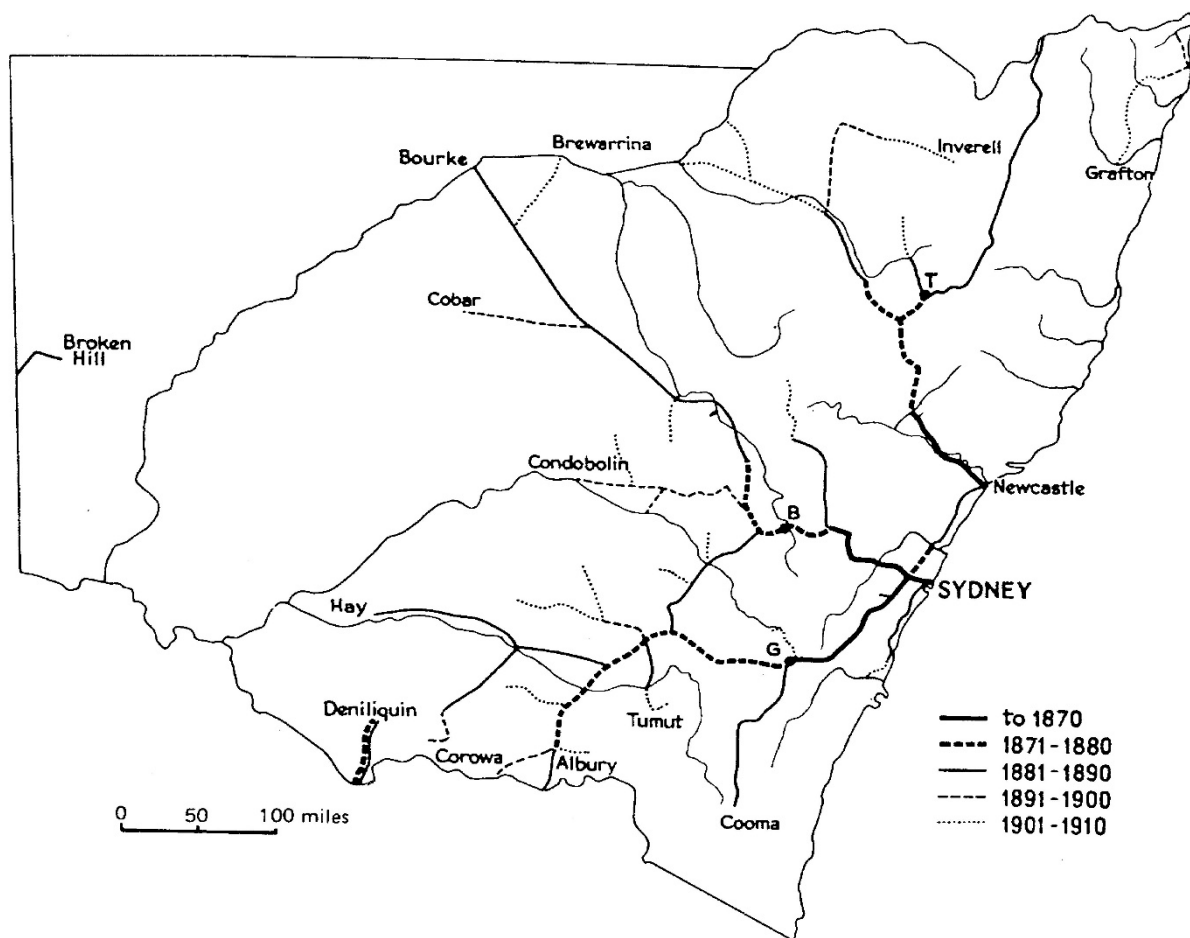
Map 6   **The expansion of the railway network in New South Wales, 1855–1910. The system was first built to draw trade of strategic border regions to Sydney, and only later as feeder lines opening up new agricultural land. A railway to Brisbane via Grafton was completed only in 1932. Source: DN Jeans (1971) *An historical geography of New South Wales to 1901,* Longman, Melbourne**

History and heritage

The content within this document was created at a specific point in time and should be used for reference purposes only. The NSW Government does not accept any responsibility or liability for the accuracy and completeness of the information presented in this document. Readers are strongly advised to consult more recent sources of information for the most up-to-date and comprehensive understanding.

Uses and abuses of the past

The past answers only such questions as are posed: it is neither self-explanatory nor an objective truth. Successive generations of historians have asked very different questions about the past and have sought out appropriate evidence from the enormous quantity that haphazardly survives. Despite the evocative work of archaeologists interpreting the past from physical evidence, the use of physical evidence by historians of modern periods is still disturbingly rare. The questions asked by modern historians have therefore been different from those put by historical archaeologists or heritage professionals today.

Nonetheless, history is read by a very wide lay public, which has formed its own views on the past as a result of the issues addressed by document-based historians. This lay public, particularly those involved with local history, local societies and local museums, has shown a greater interest in the way in which the past is intensely relevant to the present environment. There are at least 6 uses of the past common in Australia.

- The past as a source of community identity. People of a nation, state or regional community can identify with the struggles and achievements of their forebears through facts and objects which objectify their community past. In a multicultural Australia, care must be taken to avoid communicating an 'Old Australian' identity above that of post-1945 identity. This use of history is not without its possible abuses for political reasons.

- The past as exemplar. It is said that communities learn little from past errors, and this is borne out in the way Australian settlement has time and again thrown itself against the arid barriers that defeated past generations, only to be defeated again. Lessons, however, are slowly being learned from soil degradation, deforestation and salinity. Perhaps the chief lesson to be learned from the past is the inevitability of change and the difficulty of forecasting it. This may be a lesson needed by some extreme heritage conservationists: the past and present cannot be frozen.

- The past sanctions the present, providing tried and tested ways of doing things and representing the values of society evolved over a long period. Those sites representing a democratic form of government give strength to the historic roots of that government. The town may be proud of its origins in the efforts of early settlers and miners, and with signs of progress exhibited in old buildings. The dangers here

are of 'old fogeyism' and the selective use of the past to justify a conservative and unequal society. Early historical conservation was over-concerned to preserve an upper-class gracious past, which was quite unrepresentative but which bolstered contemporary pretensions.

- The past as a reservoir of unexhausted ideas. The clothing fashion industry demonstrates this well. The past contains aesthetic, cultural, social, even technological features which can be rehabilitated and made to serve again. This is demonstrated in gentrification and the demand for antiques, but also in the ideas of 'plaza' and 'mall'.

- The past as a source of aesthetic satisfaction. There is an attraction about the patina of age, but many old buildings are attractive in themselves and lend variety to an increasingly placeless form of modem and post-modern architecture. Old buildings more often reflect a human scale of living lost in the present day. Care must be taken, however, to prevent present-day aesthetic preferences interfering with the conservation of a fully representative stock of past building: tastes change.

- The past as an economic resource. Full heritage conservation can only be achieved with this recognition. Firstly, many old buildings are solidly constructed and are cheaper to convert to new uses than would be the construction of a new building. Secondly, tourists can be attracted to old buildings and precincts. Many represent a significant source of income to the owners of the building and surrounding businesses. This argument for conservation of the past's built fabric is most likely to prevail in local communities.

What is missing from these uses of the past is any widespread realisation that the heritage item, the cultural landscape, the archaeological site, the museum artefact, are all equally valid evidence of the past as an official document or a pioneer's memoirs. This realisation is growing, but it will not reach maturity among the general public without more widespread encouragement from the historical profession.

Historical interpretation

Academic historians of Australia have been preoccupied almost exclusively with the library and have rarely ventured into the field. The material remains of European society in Australia have only recently become the object of informed concern. The doyen of Australian historians of mining, Geoffrey Blainey, began his classic book, *The rush that never ended*:

> Across Australia are ruins and scars of a lost age. Amidst anthills a Cornish boiler lies in the sun, in low red ranges an iron chimney spreads its long evening shadow. Long tropical grass conceals a barrow wheel and the rubble of a miner's fireplace. On old goldfields small holes and mounds of clay cover river flats like a vast graveyard.

It is evocative prose, but none of this evidence is used in the book. No-one reading Blainey would discover what survives on any of the mining fields whose history is so magisterially analysed. Nor would anyone be persuaded that such mining heritage constitutes a major resource for further historical study.

This attitude of indifference towards material evidence was paralleled by a similar reluctance to establish criteria for using visual evidence (maps, plans, drawings, photographs) as more than mere illustrations to a documentary history. It was also paralleled by a patronising attitude towards local and regional history in general. For a variety of reasons, colonial and early Federation Australia did not produce the clergy, lawyers, squires and schoolmasters who created the British tradition of local history-writing. Only in the past 20 years have the universities in Australia begun to see the validity of a local or regional approach to historical problems. The geographer RL Heathcote blazed a path with *Back of Bourke* in 1965, but the pioneer at the regional level in the historical profession as such was Sir Keith Hancock of the Australian National University, who in his retirement in 1972 published the only great history of any Australian region to date, *Discovering Monaro*, subtitled *a study of man's impact on his environment.*

Hancock's major book appeared a year after the establishment of the Australian UNESCO Committee for the program on 'man and the biosphere', which in subsequent years examined the 'dimensions of environmental quality' in relation to 'the social, natural and man-made environments' as its project 13. The symposium on 'man and landscape in Australia: towards an ecological vision' held in Canberra in 1974 as part of this UNESCO project was of cardinal importance. Its published papers, taken in conjunction with Hancock's *Discovering Monaro* 2 years earlier, constitute foundation texts for attitudes and methodologies in studying the cultural landscape. It is sadly significant that out of the 27 Australian participants in the Canberra symposium only one (Geoffrey Bolton) was an academic historian and one other an historical geographer (RL Heathcote). Bolton surveyed the influence of environmental factors in the writings of Australian historians and concluded:

> There is a need for further regional studies of the impact of man on the Australian environment; not forgetting Aboriginal man, whose use of fire and hunting techniques is now thought to have had a much more profound effect on the vegetation than has been commonly acknowledged. It would be particularly useful if some intrepid scholar were to venture upon a history of Australians acting upon their environment.

Some years later, in 1981, Bolton himself, intrepid as ever, published *Spoils and spoilers*: *Australians make their environment, 1788–1980,* but this bracing and pioneering work is short and many more substantial studies are still needed, just as most regions of New South Wales await their historian. Only New England, the Manning Valley, the Pilliga Scrub, the Riverina and the Western Plains have commanded real regional histories to share the shelves with Hancock's *Monaro*.

To put heritage items within regional and wider contexts, therefore, more general works on Australian history have to be used.

There is no agreed single interpretation of the history of Australia, of which New South Wales is a part. Rather, several schools can be identified.

An older generation of historians whose books are still in use can be identified as Liberal Progressives, telling the story of Australia as a movement from overseas rule to self-government and an increasingly benevolent welfare state. Examples are G Greenwood

(Greenwood 1955) WK Hancock (Hancock 1930) and RM Crawford (Crawford 1952). Largely concerned with political history, these stories are products of an era which believed in 'progress'. The life of the common man was largely ignored and the political links with Britain emphasised.

This school can be contrasted with the Old Left, which first placed Australia and its class relations within the context of economic imperialism with B Fitzpatrick (Fitzpatrick 1941) and has recently turned its attention, by way of neo-Marxist analysis, to the oppression built into the development of Australia, as with RW Connell and TH Irving (Connell and Irving 1980). The romance of developing a new country is lost in the story of class struggle and the improvement, if it can be recognised, is seen not as the product of liberal democracy acting benevolently, but as the hard-won gains of proletariat pressures. The "labour historians" such as Gollan present segments of these overviews.

The attack on the liberal view, which much supports the status quo, is continued by the feminist historians such as M Dixon (Dixon 1976) and A Summers (Summers 1975). Women are seen as a particularly oppressed group in Australian society, whose history has been suppressed by conventional, mostly male, historians. There is certainly a case for considering women more predominantly in heritage conservation.

Less critical of Australian society are the Populists who view the history of the country from among the 'people' broadly interpreted, being less concerned with politics than with manifestations of ways of life or with a distinctive Australian way of life. This school may have begun with CEW Bean, but it was given full expression by R Ward's *The Australian legend* (Ward 1958) and subsequently in the writings of K Inglis (Inglis 1974) and D Denholm (Denholm 1979). P Spearritt's contributions may be said to lie within this tradition, which is unearthing the story of Australian life through the history of ordinary people and their institutions, often using oral history. Except for Spearritt's *Sydney since the twenties*, (Spearritt 1978) contributions to regional history have been very limited.

This may also be said of the New Radicals who write anti-establishment history of long-standing institutions such as education while pursuing a multitude of hidden groups such as members of the LGBTQI+ community. The populists display no such tendencies, being content to chronicle upper-class everyday life as part of the general scene, while the radicals excoriate such ways as imported and pretentious. The significant publication so far was edited by Burgmann and Lee (Burgmann and Lee 1988).

Historians can thus be seen to share no common view of Australian history. Heritage conservation cannot simply adopt one of these views, for inevitably other interpretations will follow. Historians and heritage conservation have in common, however, a shift in the last 30 years to the compilation of a less 'establishment' more wide-ranging view of the Australian past, including the lower orders and more of economic activity. Whether a particular building is seen as a triumph of aesthetic sensibility or technology or as a symbol for working class oppression cannot be determined by the heritage conservationist, who must leave it to the historian, curator or educationist to determine how to interpret the building. It does present problems however if the conservationist wishes to add a text to the building, either in the form of

a justificatory statement for its conservation or in the form of an educational guide. A problem-free history is not stimulating and can be interpreted as a conservative attempt to maintain the status quo. Heritage history cannot be entirely neutral.

Historical regions

Approaches and context

New South Wales has a spatial arrangement that is determined by its membership of the capitalist world economy. The country was developed in the nineteenth and twentieth centuries to deliver raw commodities to the core countries of the international system, at first mainly Britain, and it was supplied with capital and labour attracted to do so. Despite this peripheral role, investment and the very high productivity of labour in the resource industries enabled high wages to be paid, so avoiding the poverty of the typical peripheral country and making possible the rise of diverse local specialities, some of which, like dairying and sugar-growing, became themselves export staples supporting regional economies. For a time in the twentieth century, with political support and protection, even manufacturing employed a significant part of the workforce, but global restructuring has removed much of this element.

The geography that emerged facilitated the transfer of Australian resources and surplus to the core countries. Dominant here is the role of Sydney as head-link in the transfer of resources and capital, reflected in Sydney's urban primacy. Sydney's share of the New South Wales population was 45% in 1821, but then as inland resources were exploited it fell to 27.3% in 1851. Sydney's share then rose to 37% in 1911, 59% in 1971, and 57% in 1986.

Various reasons have been offered for this primacy. One factor is the sparsity of resources elsewhere, which prevented large settlements getting established but, primarily, Sydney in the nineteenth century was the major port. It had no competition or alternatives. The transport system, which in the days of railway building deliberately set out to channel traffic to Sydney, continues to do so in the more mobile period of automotive travel. For this to happen, it seems that a large city reaches a stage of self-sustaining growth, where innovations, thresholds and amenities contribute to an ever-increasing share of population in an urbanising world. Before railways, government made roads with the aim of decentralising wool export to Eden, Jervis Bay, Kiama and Port Macquarie; these never succeeded, due to poor port facilities, little shipping, and the attractions of Sydney financial and mercantile houses even in the days of months-long dray travel. It may be argued that urban primacy is the most usual state for peripheral countries, and indeed it is widely seen. All that is wanted inland is the small service town which will supply retail goods and local services. This is how the country town developed, with some of them turning into incipient regional centres only recently. The affluent society, with its desirable consumption in the big city, has reinforced past trends.

Regional divisions

Various sets of regions have been identified in New South Wales over the years for sound practical reasons. Today there are, for example, 14 land board districts (plus the Western Division), which exist for the purposes of the Crown Land Acts, as shown on

Map 3 The state is also divided into 12 statistical divisions, different from other groupings: Map 4 shows statistical divisions that were used when this document was originally published in 1996. These divisions were used to inform tourism and other services.

Christian churches have divided the state into ecclesiastical regions: at present there are several Anglican dioceses and Catholic dioceses in the state. Many local councils have formed regional organisations in a loose confederation: the non-metropolitan groupings are shown on Map 5. Oldest of all are the Aboriginal cultural groups, as shown in the AIATSIS map of Indigenous Australia.

Seventeen heritage regions are now proposed. Most of their names are familiar, but their boundaries do not necessarily coincide with previous regions. Regions are conceptual tools. They are an intellectual creation to fulfil certain specific purposes. In this case the purposes are those of heritage planners and managers and historians interested in the tangible evidence of the state's development.

The identification of regions is dependent on the use which will be made of them. Definitions are instructive but capable of different applications, for example:

'a geographic area unified culturally, at first in economic terms, and later in a consensus of cultures which distinguishes it from other areas' (Young).

'An area where there has grown up a characteristic pattern of adjustment to environment' (American Society of Planning Officers).

'An area in which the combination of environmental and demographic factors have created a homogeneity of economic and social character' (TJ Woofter).

Professor McCarty has focused attention on individual regions falling into 2 broad categories: single-feature and multiple-feature (McCarty 1978). Professor Andrews' agriculture regions of eastern and central New South Wales, defined by 'similar crop associations and a similar stage of agricultural development' are examples of single-feature regions, or perhaps more accurately, of regions defined by concentrating on a single feature (Andrews 1934). States such as Victoria might be regarded as single-feature regions defined by central political control; and the state of Tasmania bas been treated as a region primarily because of its geographical isolation as an island (Solomon 1972). But the more relevant definition of region is one which combines geographical and physical features with the changing society of the area and the exploitation of the environment.

Professor McCarty's discussion of this social environment dynamic view of the region is worth quoting at length.

It is in the form of land use – whether the Gippsland forests remain the preserve of Aboriginal food-gatherers or timber-cutters, or are cleared for dairy farms – rather than the land itself that defines the region. A leading theme in Australian history, the occupation of the open grasslands, has given rise to many excellent regional histories. Margaret Kiddle's western district of Victoria and Buxton's Riverina are formal regions defined mainly by the characteristic of pastoral dominance: DW Meinig's region is the expanding South Australian

wheatbelt from 1869 to 1884. The main theme of Waterson's history of the Darling Downs – the struggle to establish farming in a pastoral region suggests a multiple-feature region.

Both Kiddle and Buxton, however, use the political feature of colonial boundaries to delimit their regions, Kiddle on the South Australian border and Buxton on the Victorian, and Buxton's northern boundary is arbitrary in that there is no clear break in pastoral land use. The inconsistency is resolved if one accepts that both historians are concerned primarily with the social identity, and unity, of a (pastoral) region …

For a regional social history to achieve coherence, and significance, it is most important that the historian recognises that the dominant characteristic is the regional society itself, rather than the economic activity, such as wool-growing, on which it is based (McCarty 1978:91).

The full realisation of regional society calls for the skilful integration of rural and urban experience. Professor Weston Bate has been much more critical than McCarty of the failure of most regional historians in Australia to integrate town and country. The strictures which he levelled at Margaret Kiddle's history of the Western District of Victoria, where the single chapter devoted to towns is 'set apart from the core of her work' (Bate 1970:204–205) might just as appropriately have been applied to Professor Walker's *Old New England*. In Walker's chapter on the 'the townsmen' of nineteenth-century New England, integration starts and ends with the observation: 'Yet by the time the clock struck midnight [in Armidale] the lights had dimmed, the excitement abated and the countrymen had set out for home over the rough well-rutted tracks' (Walker 1966:117–118).

As a means to an end, the coherent organisation of information into a story, the regional worker needs:

- to encompass the whole area under examination
- to realise that some areas have great distinctiveness while others are less coherent, so that treatment at a subregional scale is often indicated
- to avoid a mere catalogue of contents – there is a need to demonstrate continuity over time and an interdependence of commodity and culture
- to avoid determinism – human choices are contingent and operate in a wider world context than the region itself
- to accept popular regional identity.

A regional study can make use of statistics but is essentially concerned with qualitative and literary analysis seeking out character and culture.

Heritage regions of New South Wales

Heritage regions have been distinguished in New South Wales at first in terms of topographic identity, but taking into account popular identity (Monaro, New England, Riverina, Illawarra) and the processes of occupying the country already outlined. Common processes and patterns of settlement have developed within certain regions, while others present varied patterns in which there is both unity and complementarity. No part of New South Wales is left outside the regional system, and all regions coincide

with local government boundaries as at 1996. The 'limits of location' of 1829 and the Western Division boundary of 1884 are preserved virtually intact.

The Sydney region is defined by the present commuting boundaries of Sydney, which have extended to the Blue Mountains, Central Coast and the corridor leading south-west to Mittagong and Bowral. Mostly this region is bounded by sandstone uplands. (See the Preamble to region 1: Sydney for comments on the distinctive nature of the Sydney region.)

The Lower Hunter region has a unified history as the old coalfields area centred on Newcastle, its port and industries. The history of this region is sufficiently complex to separate it from the other more unitary parts of the Hunter Valley.

These however form a region, surrounded by uplands except in the Cassilis Gate, and united by the river and its associated lowlands. Intensive agriculture, dairying and grazing have been the chief land uses since early European times.

The Manning Valley and Great Lakes region is given unity by the Manning River, and its twin towns of Taree and Gloucester. The southernmost of the northern river valleys, it has not shared their semitropical character, and is much more a complementary mixture of upland and lowland.

The northern rivers region comprises a series of river valleys with extensive alluvial soils given unity by a common history and industries, from cedar to sugar, maize and dairying. Resort and retirement development have been important. Residents probably identify with their own valley rather than with the region as a whole.

The New England region has a local identity firmly embedded in its history and rather clear topographic boundaries. An early area of grazing expansion, its attitudes, pastures and Scots ancestry give it a physical and cultural unity.

Broken country separates New England from the level Darling Plain to the west. Defined by aridity on its western boundary, signified by the shift from woodland to scrub and bushland, it extends over the plains draining rivers to the Darling, including subregions such as Liverpool Plains and the Pilliga Scrub.

The Central Tableland region is an area of older settlement on solid geology which made gold mining an important phase in its development. Mostly within the 'limits of location', it has older towns and settlement than areas further out. Significantly it includes the Lithgow coalfield and associated industries, though Bathurst is the chief centre.

To the west lies a marginal area, invaded by wheat grazing rather later, and still marginal for farming in the west. Urban development centres on the old mining towns of Parkes and Forbes, but Condobolin and Hillston are important centres.

The Southern Tableland represents another area of early settlement as pioneers entered the grassy plains from Goulburn. The 'limits of location' provide its approximate western boundary and it is separated from the coast by a steep scarp with few passes.

To the west is the northernmost of 2 regions which together comprise the 'Riverina' broadly interpreted. This Murrumbidgee Region comprises the middle and lower Murrumbidgee River, terminating sharply in the west by intensive cultivation in the Murrumbidgee Irrigation Area which gives way to an extensive pastoralism. In the east it is safe wheat–sheep country.

The southern part of 'Riverina' is in the Murray region. On the east this comprises the more rugged areas of the upper Murray, giving way at the Hume Weir to rolling grazed hills, and to the east by wheat–sheep and pastoralism. Both the Murrumbidgee and Murray region are tied together by their past usage for river navigation and their present usage for irrigation.

The Monaro region is clearly defined by surrounding rugged topography as a grassy plain, with its northern entrance at Cooma, but consists of 2 distinct subregions, the plain itself and the Kosciuszko massif with its national park and Snowy River Scheme.

The South Coast region has a unified history in its grazing, dairying, tourism and fishing industries. It consists of areas of good land on alluvials and granites, separated by wide areas of unproductive sandstone and much forest.

The Illawarra region is one of those recognised by early settlers as distinctive, comprising fertile lowlands, easily accessible to Sydney by boat. The western boundary is clearly marked, as is the South Coast, by a steep scarp rising inland. The southern boundary is fixed by the extensive Shoalhaven shire, southwards of what is desirable on historical and topographic grounds. There are distinctive subregions in the coalfield and industrial areas of the Wollongong–Port Kembla district, in the Jamberoo Valley and Kangaroo Valley, in the dairy country and Berry, and the sandstone country south of Nowra with its coastal resorts and fishing ports.

In the far west the Western Plains region takes in what was defined as the Western Division in the *Crown Lands Act 1884* (NSW), so far as shire boundaries permit. It is semi-arid extensive grazing for sheep and to a lesser extent cattle, managed as to its land tenure by the Western Lands Commission. River navigation has been important, as has mining, in providing the few urban settlements found here.

This regional division, with its physiological, vegetational and historical distinctiveness is suggested as a basis for coherent regional histories.

Regional histories

The regional histories that follow have been prepared in order to help achieve an overview of the state's history, on a regional basis. They aim to redress a geographical imbalance in existing analyses of the state's history, although in doing so they necessarily tend to suppress the complexity and significance of the dominant region, Sydney.

The regional histories were originally compiled as part of the State Heritage Inventory Project draft *Historical guidelines* to provide an historical context for the task of heritage identification. The draft guidelines also included a bibliography, a specially compiled folio of maps and a series of themes relating to the settlement of New South Wales.

The guidelines have been revised following testing of the State Heritage Inventory tools in 4 pilot heritage studies, and receipt of comments from consultants undertaking the pilot studies, some professional bodies, other practitioners and a number of councils and historical societies across the state. The historical themes and bibliography are now separate components of the project (see Introduction).

Seventeen heritage regions based on historical and geographical criteria have been identified in this document. Within a restricted time, 2 consultants have written histories of each of these regions. Dennis Jeans has been responsible for regions 1 to 7 and region 15, Ian Jack for regions 8 to 14, 16 and 17.

No single formula for a regional history has been used throughout, although all the histories rely on a blending of the chronological and the thematic. Because of restricted time, annotations have been provided for only 7 of the regions, and maps and other illustrations have been added to clarify the development of 9 of the regions.

At the beginning of each regional history is a list of the 1996 local government areas within the region and a brief geographical description of the region. Map 1 shows the location of the regions.

1.   Sydney

This region encompasses the Sydney metropolitan area and its commuter region, with the exception of the northern Illawarra, which has a distinctive landform and historical dissociation from Sydney. The region is well-bounded topographically by including the Hornsby plateau to the north, extending into Wyong Shire and Gosford which is increasingly coming into the orbit of the Sydney housing market with improved communications. On the west is the plateau of the Blue Mountains, an early barrier to expansion, which is now a commuter and vacation area for Sydney. To the south is the Woronora plateau, much occupied by the Royal National Park and catchments for water supply. The region is extended in the south-west to include the natural corridor leading to Goulburn, where commuter, retirement and recreational towns have developed.

The core of the region is the Cumberland Plain developed in Wianamatta shale, with important alluvials along the Hawkesbury and to a lesser extent at Botany Bay.

The coast provides harbours in Sydney Harbour and Botany Bay. As elsewhere in New South Wales, the sea rose after the last glaciation and has drowned the valleys which frame these deepwater parts and the Hawkesbury Valley.

Consequent accommodation of sand in embayments provides for resort development.

Local government areas

All Sydney metropolitan councils

Cities

Blue Mountains, Canada Bay, Canterbury Bankstown, Cumberland, Fairfield, Gosford, Hawkesbury, Liverpool, Parramatta, Penrith, Randwick, Ryde, Sydney

Shires

Hornsby, Sutherland, The Hills, Wollondilly, Wingecarribee

Map 7   **Local government area boundaries of the Sydney historic region (excluding Sydney metropolitan councils)**

Introduction

The decision to designate Sydney as region 1 was taken in order to maintain the logic of the geographic divisions of the state. While it can be characterised as a region for some purposes, Sydney is overwhelmingly more significant than the other regions, not only in its concentration of population and functions it contains, but in the complexity of its functions. This in part stems from the frequency of overlay of land uses, and in part from the degree to which 'local' activities and 'higher order' activities share the same geographic space.

Much that is of heritage significance within the central city area is significant not only (or not even) to the region, but to a far wider locality – in some cases to the world. The implications for the heritage inventory of Sydney's dominating position are:

- Items of significance at the local suburban level must not be allowed to be swamped by the dominance of the centre.
- Heritage items at the centre which are of local significance must not be jettisoned in favour of items of a wider significance which occupy the same space.
- Some of the areas contained in this region would not be considered as part of Sydney at present, while some areas which are currently so considered would not have been so in the past. The evolution from rural to suburban to urban is always rapid within this region.

The political and economic dominance of Sydney over the whole colony from the start of European settlement means that in many cases the significance of activities in all the regions will only be understood when the links are made with the Sydney region.

Sydney now holds around two-thirds of the state's population, as a primary city serving a rural and mining hinterland that is not entirely coextensive with state boundaries: in a sense, Sydney since the 1970s has acquired a much wider role as financial capital of Australia and a major world financial centre. Even before this its growth was seen by many as unbalanced in a thinly spread population. As the size of its population has grown, Sydney's built-up area has spread within the Cumberland Wianamatta shale lowland, and on to adjoining coastal sandstone plateaus, the Hornsby and Woronora plateaus. In a way Sydney has been ultimately, though not initially, fortunate in the broad band of rugged sandstone upland that surrounds it, giving it breathing space for recreation and water supply, but such is the scarcity and price of land that Sydney's urban community lies now well beyond these barriers, on the Central Coast, in the Blue Mountains, and to the south-west highlands. Sydney even draws some commuters from Illawarra, another region. Modified by its topography, Sydney has grown as a modern city over a long period. Its growth has been affected by rising land prices at the centre; radial growth dictated by changing modes of transport; and booms and busts in the Australian economy.

Beginnings

Governor Arthur Phillip arrived on the coast with convicts in January 1788: finding Botany Bay not to his liking he sought out Port Jackson, and discovering a run of water

there he made a start on the colony at Sydney Cove where the now-tunnelled Tank Stream provided fresh water. Very soon the 1,000 or so people were housed in tents, wooden huts or wattle and daub houses, with bricks made after March 1788. By 1799 the population had grown, mainly by transportation, to 2,500. A subsidiary settlement had been set up at Parramatta, where soils were better for agriculture, and this was surrounded by smaller settlements at Prospect, Toongabbie and the timber gang at Castle Hill. Time-expired and ticket-of-leave convicts were already farming on the Hawkesbury alluvial, against Aboriginal resistance.

Early Sydney showed no signs of fulfilling Erasmus Darwin's dream of a southern metropolis:

> There shall broad streets their stately walls extend,
> The Circus widen and the crescent bend:
> There, ray'd from cities o'er the cultur'd land,
> Shall bright canals and solid roads expand.
> There the proud arch, Colossus-like, bestride
> Yon glittering streams, and bound the chasing tide.

The only bridge was a wooden one, over the sullied Tank Stream at Bridge Street, and the best road was a bestumped and rutted track that led to Parramatta.

Little of this early Sydney survives except the street plan. It was a wooden town soon overtaken by grander buildings, as Fowles shows in his drawings of Sydney streets in the 1840s. Even by 1829, Robert Burford could write in his *Description of a view of the town of Sydney*:

> The houses are in general substantially built of freestone, or brick plastered, seldom more than two or three stories in height, with verandas to at least one story; the roofs are covered on with shingles of iron bark, or cedar. Near the harbour, where the ground is valuable, the buildings are contiguous; but, generally speaking, the better sort of houses are detached, having a small enclosure in front, with a neat geranium hedge.

Most of this was still within Meehan's plan of 1809, essentially laid down by Phillip, but government in the 1820s was still struggling to enforce conformity with building lines in the streets.

A major contribution to the public splendour of this colonial port was made by Governor Macquarie, who between 1810 and 1821 built some fine structures, some of which survive. The Mint building (1812) and Parliament House are 2 wings of his 'rum' hospital. The Hyde Park Barracks was built in 1817, Macquarie Lighthouse in 1818, and St James' Church in 1819. Fort Macquarie was finished in 1819 to complement Dawes Battery for harbour defences, and the government stables, later the Conservatorium of Music, was finished in 1821. All this with the help of the architect Francis Greenway, who also designed bridges, a hospital at Liverpool, the Lancer Barracks at Parramatta, and an obelisk in Macquarie Place to denote distances in the colony for which Sydney was the centre. St Luke's Church was built at Liverpool, St Matthew's at Windsor, 2 towns that reflected Macquarie's aims of civilising the remoter settlements. It was Macquarie who began to make settlers conform their enclosures and buildings to Meehan's plan and who may be said to have lifted Sydney into the status of a town rather than a camp.

Economy

The Crown paid for all this mainly through expenditures on the upkeep of the convicts, and by convict labour. Until 1820, the Commissariat was the chief supplier, the chief buyer and supplier of labour. With its help, fine buildings were made, and roads constructed, to Parramatta, on which tolls were charged, to Liverpool in 1814, to Botany Bay in 1813, while Cox's road to Bathurst was made by convicts in 1815. South Head Road was providing a promenade for Sydney people from as early as 1811. But while a trail was blazed to Goulburn by Throsby and Meehan, the road was not begun until the 1820s. A track to Illawarra was found at the same time. But while people were reaching out, Sydney remained their focus.

Trade had begun in the very early days, in articles of use, and increasing in imported rum which was used to buy the spare labour of convicts. Officers speculated in imported goods and merchants joined them, one of the most significant being John Campbell whose wharf and warehouses occupied the western side of Sydney Cove. Behind lay the 'rocks', already a labyrinth of ill-drained slums and sly-grog shanties. Imports were paid for by bills on the Commissariat in London; exports were limited, though cedar was exported from 1806.

The basis of a new economy was found in the 1820s. First there was whaling and sealing: ample resources lay off the eastern Australian coast and were easily exploited. Parties of whalers and sealskin robbers left Sydney, and exported their oil, spermaceti, whalebone and skins through American ships, which engaged more in open-sea whaling. From the late 1820s, the East India Company's monopoly on Australian trade was broken and the industry could ship directly to England. When the supply of local whales was exhausted ships were sent to New Zealand waters. Until 1834, exports from the fisheries exceeded in value those from wool. Shipping meant industry – sailmakers, ropeworks, slipways, timber and more trade in ships' chandlery. The town had acquired the colony's first staple industry and self-initiated growth. Shipments of wool increased the trade of the port, and eventually, as Barnard has described, a wool sales auction market in Sydney itself to which overseas buyers were coming in mid-century.

A growing population meant a market for easily made consumer goods, often bulky to transport. A steam flour mill operated from 1813 and there was growing diversification into soap and candles from local tallow, breweries, distilleries, tanneries, iron foundries, woollen mills and a sugar refinery in 1841 that still stands at Cooks River. Salt was boiled, hats, boots, clothing manufactured, paper and furniture made. Pottery, brick-making, tile-making, used the local clay. The stench from some of these industries was so poisonous that during the 1830s they were pushed away from the populated areas and towards waterside areas. Then, in 1849 legislation was enacted which ordered these industries to remove themselves from within the city boundaries within 10 years. They settled at Blackwattle Swamp in particular, though others went further afield to Botany. In some of these trades, Sydney supplied the whole colony, in others, inland centres sprang up, defended from Sydney competition by the cost of transport. In 1853, Sydney had only 3 of 16 breweries, 15 of 130 flour mills, and one of 5 woollen mills. Centralisation was to come later.

By 1900, with the aid of railways, Sydney had 63% of the colony's manufacturing workforce, by 1920 it was 75%. This process of extinguishing country enterprise was encouraged by economies of scale, freight rate policies on the railways and branding,

The brewing industry demonstrates the complex processes at work that turned Sydney from a mercantile city to a manufacturing city. At first country breweries were encouraged by government and protected from Sydney by high costs of transport, even by water. The beer made was highly perishable, because hops were scarce and expensive. The inland breweries even survived at first the coming of the railways, because they could deliver promptly to the local area, and had their tied public houses, and a local price advantage. The attack when it came in the 1890s was partly financial, partly technological. New scientific methods made brewing high-quality beer a large-scale activity, and the city breweries that took this up needed more outlets. To achieve this they bought up and closed down country breweries already hampered by a new tax on beer that undermined their price advantage and made demands on their working capital they could not meet. The improved keeping qualities of the new beer made country markets accessible, and the city breweries practised price equalisation to keep country prices down. Tooth's, Resch's, Marshall's, Marks and Cornwall's city breweries took over the country trade and by 1921 made 80% of the state's beer. Transport, technology, access to a large local market and financial power were all elements that simplified the country town. In the nineteenth century the country town was a manufacturing area: in the twentieth century it was a service centre distributing Sydney-made goods or goods imported through Sydney.

Meanwhile, the functions of government grew and were concentrated in Sydney. New South Wales has been dominated by government licence, restrictions, land control and planning from its beginnings and the growth of the modern bureaucratic state in the nineteenth century was nowhere more apparent than in New South Wales where government interfered more and more with aspects of work, leisure and settlement. A vast bureaucracy grew up, which swelled Sydney's population, and produced grand edifices that showed the power and righteousness of the democratic state in such buildings as the Lands Department, the Education Department and the Chief Secretary's Office. This was a duplication of Macquarie's earlier efforts to impose an official landscape on central Sydney.

Early suburbs

Even in the 1830s and 1840s, those who could afford it left the centre for more Arcadian surroundings, thus forming the first suburbs. Sydney was still a walking city and the mass of the population crowded into narrow tenements within the old plan, too poor to afford horse transport. But the population grew from 11,000 in 1828, to 30,000 in 1841, and some relief was needed. In the prosperous years of the 1830s, many could afford new houses and land speculation in subdividing near-city estates was rife. Sydney was 'completely English' according to one visitor, CJ Baker. The footpaths were paved, water was drawn from the Lachlan Swamps (now Centennial Park) through Busby's Bore, wooden buildings were prohibited, noxious industries kept at bay and some roads were macadamised.

Beyond the city was a rising ring of suburbs, mostly on high ground for health and sea cooling breezes. Far out on the south shore of the harbour lay Watsons Bay, a fishing village too far off for these early suburbanites: it became a suburb only in the 1860s. Closer in was Darling Point, connected by New South Head Road in 1831, divided into large gentlemen's allotments with fine houses such as Carthona and Lindsay. The impressive St Mark's Church was built in 1848.

Closer in was low-lying Woolloomooloo, which in this period was an upper-class suburb, but by the 1880s had deteriorated to working class level. Darlinghurst was a mixed suburb of many small terrace houses, mixed with some grander ones, replacing the windmills that earlier stood on this ridge. Darlinghurst Gaol, designed by Mortimer Lewis and built in 1841, lowered the tone. Lewis also designed the courthouse facing Taylor Square. Redfern, originally surgeon William Redfern's estate, developed first as a high-class suburb, losing its status when the railway and Eveleigh yards arrived and made it a working-class area. Paddington at first had some good houses, such as Juniper Hall, but the siting of Victoria Barracks in 1848 made it a home for soldiers and their families. Its terrace houses are therefore of very mixed size and status.

Newtown was an attractive residential suburb in the 1830s and 1840s, but subsequent subdivision produced in the later century a largely working class, tightly packed suburb interspersed with some grand terraces such as those on Georgina Street. The original St Stephen's church, designed by Edmund Blackett in 1844, was replaced by the same architect 30 years later on a site within the existing Camperdown cemetery.

Most people in the Sydney area were buried in a public graveyard, first at Brickfield Hill where the Town Hall now stands, then at Devonshire Street on the site of Central Railway Station and finally at Bunnerong, Rookwood and North Ryde. Northern Sydney had its own fine burial ground at Gore Hill, dedicated in 1868. All demonstrate changing attitudes to death in society: the churchyards denote a community death, the nineteenth-century graveyards as at Waverley, celebrate the death of the individual with their grand monuments, while the simpler style of the twentieth-century monument illustrates the hidden anonymous death from which our contemporaries recoil.

Grose Farm, Crown land, separated Newtown from the Glebe, a suburb built mainly on land granted early as an endowment for the Church of England. At its Parramatta Road end this was a working-class suburb, serving the industries of Blackwattle Bay and the stockyards to which cattle were brought in from the west. On the peninsula, however, were large subdivisions with some fine houses. The upper-class suburbs of the time can be recognised partly from surviving buildings, but chiefly by the dominance of professional men and merchants, and also domestic servants, among the occupations recorded at the 1841 census. This showed Balmain to have been a fashionable residential area early on, connected to the city by ferry. The construction of Mort's Dock in 1854 brought in a working-class element.

Most of these upper-class suburbs were overtaken by the spread of the working class in the inner-city ring, their inhabitants moving further out to more genteel places. The eastern suburbs however maintained the momentum given to them as 'better' areas in the 1830s and 1840s, helped by their recreational harbourside location. These actual

building developments should not obscure the amount of land subdivision that went on in the boom days of the 1830s: many estates beyond reach of actual settlement were subdivided and their ill-aligned road patterns can still be seen in inner areas such as Drummoyne. The early officers' estates still determine much of the street pattern.

The Cumberland Plain

The farming of the Cumberland Plain began around Parramatta, for a while the Governor's chief place of residence. Parramatta emerged around a mile-long street running from the wharf to Government House, near which an observatory was built by Governor Brisbane. It stagnated into a very English-like country town until its absorption into Sydney. Around were patches of agriculture, on the volcanics at Prospect and at Toongabbie.

The need to create a local food supply was partly met on the Hawkesbury and in Airds and Appin to the south-west where topography left quaternary soils suitable for cultivation.

By the 1790s the alluvials on the Hawkesbury were taken up by small farmers growing wheat and maize and shipping it to Sydney in small boats, often built on the river itself where cedar was found. Thus arose the connection between cedar-getting and shipbuilding that was to characterise the north coast.

Governor Macquarie founded an urban base for this small-farming endeavour. At the Hawkesbury he laid out Wilberforce, Pitt Town, Windsor, already a flood-free settlement known as the Green Hills, Richmond and Castlereagh. All except the last acquired some settlement, even though farmers were reluctant to leave their holdings to live in a flood-free town. Macquarie also designed Liverpool to be the capital of the south-west but added sites for Campbelltown and Appin within Airds and Appin.

Urban growth was slow. Only Windsor, strongly supported by government with St Matthew's church and a courthouse built in 1820–1821, achieved much early status, as the chief shipping point, though Richmond eventually emerged as a farmers' town and Wilberforce and Pitt Town as small villages. The site for Campbelltown, which had St Peter's church in 1823, was expanded and replanned by TL Mitchell in the early 1830s, as was Appin. By this time however the agriculture of the Hunter Valley was taking over the Hawkesbury's function as the chief agricultural area and rust in wheat in the 1860s, combined with heavy flooding, reduced its significance greatly. The south-west went over to grazing on larger holdings.

Most of the Cumberland Plain was held in large grazing estates, many of which became headquarters for chains of runs stretching out into the pastoral areas. George Cox's Winbourne was one such estate, supporting a large house in parklike surrounds fed by a series of runs stretching to the Namoi. Sir John Jamison's Regentville was another such estate, which has been explored archaeologically. John Macarthur's Camden Park occupied the best of the Cowpastures, and he founded Camden as a private town in the 1830s to compete successfully with the government foundation of Narellan. Penrith grew as an informal street-town on the highway to the west; it was officially proclaimed

a town in 1818 when there were already a courthouse and lockup on the site. Its importance grew with road traffic, though wheat and vines were grown in the area.

After the 1860s Cumberland stagnated, its wheat industry gone and its pastoral significance reduced to a holding paddock for stock from up the country. Some districts found new opportunities: Camden in particular found it could grow hay for sale in Sydney, and eagerly took up the new manufacturing butter industry from the 1880s. Penrith farmers too went over to hay production. But the Hawkesbury vegetable farmers were conservative and continued with the maize staple, despite north coast competition, and despite receiving a rail line to Sydney in 1864. Camden had to be content with a tramway to Campbelltown, but flourished, nevertheless. The Hawkesbury continued a sleepy place, an idyllic landscape for Arthur Streeton to paint, though when it finally took up dairying, Elioth Gruner was there to record it. More life awaited a stimulus from Sydney.

To the south of Sydney lies Botany Bay, which stood aside from residential growth until the twentieth century, bypassed by the southern railway that ascended the heights of Canterbury to its west. In the nineteenth century, Botany Bay lay on the margins of Sydney, a place of recreation for both the settling Europeans and Aboriginal people. It was a source of vegetables and oysters, and a disposal site for sewage and refuse. The northern headland was fortified, just in case, but development was limited to marginal functions. An Aboriginal settlement developed at La Perouse very early, and has persisted, The Botany swamps provided for special developments as a mass of water-soaked sands and ponds. There Simeon Lord built a textile mill. Later a pumping house sent water up to Paddington reservoir when the Centennial Park resources could no longer cope with supplies. From the 1860s to the 1950s this was an area of Chinese market gardens. Cooks River, at first idealised in the Martens' painting of Sparke's Tempe House, became a sewage outlet for southern Sydney during the 1880s. Further south, Brighton-le-Sands became a seaside resort and funfair, served by a tramway from Rockdale railway station. The southern shores of Botany Bay remained undeveloped, mostly in the hands of Thomas Holt, who hoped to find coal, and made Captain Cook's landing place a memorial site in 1877.

Suburban expansion

Sydney's suburban development had begun even in the era of the 'walking' city, and took shape and spread as mass transit facilities were adopted from overseas and spread out – first ferries and horse buses, then trams and trains. S Jevons, an English observer, noticed this pattern of growth in 1855. The result was a city thinly spread over a large area and consuming great amounts of capital in service provisions. The suburb plays a distinct role in capitalist society, sheltering workpeople; acting as a nurturing ground for labour force replacement; a centre of consumption of the mass-produced goods upon which capitalism relies; and a measure of status on the ladder of success which motivates the workers at all levels. The suburb was par excellence the realm of women and children and was the chief expression of gender differentiation in the landscape. Suburbs should not be confused with 'neighbourhood': such a term was probably meaningful in the nineteenth century but has mostly disappeared as a reality in the age

of the motor car, which has turned Australians into 'cosmopolites', seeking associations throughout the city and knowing little of those immediately around them. Neighbourhood can however be resurrected by some threat to the local landscape and amenity and is always present for families in the form of the school, the chief social binding force in the suburb. The tendency to send children to diverse private schools, particularly at high-school level, removes even this source of neighbourhood in the better-off suburbs.

Suburban growth began anew with the expansion of steam ferry services from the 1840s and 1850s. Ferries played a significant role in opening up harbourside suburbs and, particularly, in serving the north shore until the Harbour Bridge opened in 1932 and Manly-Warringah until after the Second World War.

Tram services

Trams began in Sydney with a line from Circular Quay to the railway station in 1861, but this had failed by 1866. Stream trams were introduced to serve the Great Exhibition Building in 1879, but expansion was slow – only 39 miles by 1890, when electrification began – but expansion was thereafter rapid with 62 miles of electric line in 1930 and 110 miles in 1960, the end of the tramway era. Cable trams were used initially to serve Crows Nest and Edgecliff (1894), being considered necessary in these hilly areas.

Tramway patronage grew rapidly and trams became the major passenger carrier in Sydney until after the Second World War. Their influence on the development of the inner ring of suburbs was profound.

Trams were important in opening up some inner western suburbs to development, such as Drummoyne with the Iron Cove Bridge of 1884 and Gladesville with a new bridge. Five Dock was given trams in the 1920s and became a suburb of Californian bungalows. Dulwich Hill, Leichhardt and Marrickville were suburbanised by trams.

A major eastern development resulting from the trams were the beach resorts and suburbs. At Bondi, government maintained a beachside reserve, but it was a popular picnic place even before trams made it a suburb and place of mass resort in 1881. There had already been some development there, with a school in 1879. Bronte, hitherto the preserve of the residents of Bronte House, became a fashionable resort, as did Coogee, gazetted as a village in 1848. It had remained an agricultural area though frequented by day trippers until the arrival of the tram brought mass visitors from Paddington and the inner city. A pier was built in 1928, one of the few in Australia, now demolished, and a shark net was one of the first on Australia's beaches in 1929. At the same time it became a residential suburb with cool breezes and sea views. Maroubra was a late tramway development of the 1920s. On the way to the beaches, the trams passed through Kensington, an estate subdivision of the 1880s, in which the Bedford Park new model suburb with industry forbidden was a planning innovation. Anzac Parade was part of this plan. Kensington racecourse, established in 1893, eventually became the site of the University of New South Wales. Away on the far southern coast, Malabar was cursed by sewage pollution, the gaol, and Prince Henry Hospital: these were city fringe activities overtaken by twentieth-century suburban growth around them.

Trams also served the southern suburbs, first carrying trippers to Botany Bay, but later workers to the growing industries of Alexandria and Mascot that drew upon the water supplies and flat lands of the Botany Swamps, often moving from inner city congested sites. Effluent disposal onto the surrounding land was easy. Workers' suburbs grew in this direction, from Erskineville to Botany. On the eastern fringe this was thought a suitable spot for ex-soldiers' housing at Matraville after the First World War, and for the Daceyville Garden Suburb designed by John Sulman and built from 1912 to 1924.

Much of eastern and southern Sydney, varied in its land use and quality of housing, was made possible by tramway development, including the connection of Bondi Junction by rail to the city The southern suburbs railways are goods lines much used by traffic from the Kingsford Smith airport, and the Botany Bay container wharves located on the north shore of the Bay. Here too was located the Bunnerong power station, once one of several that generated Sydney's power on waterside sites: all are now closed, including White Bay, Pyrmont and Balmain stations on Sydney Harbour.

The Mosman and Warringah peninsulas

These areas were opened up by ferry services and expanded through development of the tramway system. The Mosman area had been the resort of artists and a pleasure resort, as at Clifton Gardens and Cremorne. Neutral Bay was an early whaling centre, as was Mosman Bay where ships could lie at anchor or be careened. The ferries and trams opened up Mosman as a middle-class suburb, Taronga Park Zoo moving there from Moore Park in 1916. A bridge at the Spit made Balgowlah more accessible after 1924, and this early village, planned as a resort for 'marine villas' in the 1830s became a suburb, leading to a continuous line of housing and shops from Neutral Bay to Manly.

Manly itself had a regular ferry service to Sydney from 1855 and was planned to grow as the 'Brighton of Australia'. A pier was planned but never built, but its Corso and promenade planted with Norfolk pines and its sandy beaches on both ocean and harbour sides, made it an attractive resort, particularly for country people. Many boarding houses developed on the subdivision of 1855. Here William Gocher broke the ban on daylight bathing in 1902 and set off the Australian love affair with the surf. St Patrick's College, the most imposing building, was completed in 1884.

North of Manly, the development of resorts was a twentieth-century phenomenon fostered partly by the tram from Manly to Brookvale in 1910, though Newport already had a history as a picnic spot with regular sailings from Sydney. Dee Why was Salvation Army land subdivided in the 1920s, as was Narrabeen. Further north, most development has been post-Second World War; the coast, from being a retreat for artists and a holiday place, has become a suburb relying on motor car and bus. Palm Beach has become the most fashionable resort, with many large houses, and looks over the Barrenjoey Lighthouse designed by James Barnet in 1891.

A feature of this northern development has been its relation to topography. First the narrow coastal plain was built on, then the plateau, producing such postwar suburbs as Harbord, Frenchs Forest and Davidson, and development of the steep slopes between has followed last. This process of infill between the key lines of advance along ridges

and coast has taken place inland. Other examples were the building of the railway line which opened up Hurlstone Park, Wiley Park and Bankstown to much inter-war and postwar suburban growth, and the East Hills line of 1931 which opened up Beverley Hills, Panania and Revesby. The radial pattern of Sydney, oriented to the main inland lines, gave way to a more circular shape even before the coming of the motor car as trams and new railway lines filled in the gaps and made for twentieth-century subdivisions. Sydney's inevitable route was to grow westward onto the Cumberland Plain.

Early railway suburbs

The Western Line

The first railway line in 1855 was to Parramatta, still a country town for the Cumberland Plain and, like all the early railways, was intended to go inland to serve the farming and grazing areas across the ranges. Some early stations were built, and augmented by others as subdivision proceeded. Thus Stanmore was given a station in 1878, and the large estates were subdivided speculatively for small houses. Petersham had one of the original stations, in 1860, when it was given a post office and became a middle-class suburb. Croydon was for a while an outlying area with large houses including Shubra Hall owned by Anthony Horden, a city retailing magnate, but after getting a railway platform in 1875 it was developed first with terrace housing, later with Federation houses of a better kind. Haberfield was a small outlying village, with subdivision beginning in the 1880s, but it achieved a special landscape when Richard Stanton set about creating a garden suburb in the early 1900s, when the Federation house was popular. The Federation character of this suburb bas been mainly preserved. Burwood was another original station, developing first with the large houses of businessmen, enough to support a school in 1858 when there was a small farming and timber getting community. Terrace houses were then built. The Appian Way and Federation houses were a later attempt at a model village. Strathfield similarly began with the subdivision of Redmire estate into large blocks for impressive houses, some of which remain. During the nineteenth century only the wealthy could afford to use the trains to live so far from the central workplace. Patronage was small, compared to the trams and ferries. Homebush for example remained a sparsely populated district, with a racecourse established in 1842. A working-class population collected, reinforced by the movement of the state abattoir from Glebe Island in 1906.

Flemington also was a late speculative suburb, close to Rookwood cemetery and well-stocked with monumental masons. Lidcombe further along the line had an early station, was given its present name in 1876, and saw its chief residential development in the 1880s during the great boom. Beyond, Auburn developed as an industrial suburb after much subdivision in the 1870s, and the sign of a growing population was a post office in 1880. With industrial employment, it emerged as a working-class suburb, next to Clyde and Granville, both also industrial areas. Clyde had the Hudson Brothers factory for rolling stock, while Granville had tanneries, woollen mills and agricultural machinery manufacture. While the inner western suburbs mostly served the well-to-do commuters, the far west from the beginning was a working-class area. Except for Strathfield, the

inner suburbs lost their high status as the wealthy moved to the north shore and the eastern suburbs.

The Illawarra Line

The line south to Wollongong was a product of the 1880s, in search of coal traffic from the Illawarra region. Incidentally it opened up a new area of suburban development. In 1884, the line reached Cooks River at Tempe and, after much debate, ignored the Botany Bay shore and Tom Uglys Bridge in favour of a crossing of the Georges River at Lugarno.

This opened up the interior country, notably Canterbury. Here was a rural area directed to timber getting, some vegetable growing, and much illicit activity in the form of gambling and sly grog establishments on the city fringe.

Arncliffe was reached by the railway in 1884 and speculators subdivided land. Campsie was also given a station and subdivided, but significant growth waited until the 1920s. Rockdale, or Frog Hollow, was given over to timber, farming and quarrying, all enhanced by the railway, but subdividers soon attracted a large suburban population. Kogarah began slowly, and was still growing into the 1950s. Such early developments must be seen as villages clustered around the railway stations. Penshurst and Oatley were reached in 1886 and Bexley was a major beneficiary of this line aided by a steam tram to Arncliffe. Hurstville was an early village transformed by the railway, becoming a municipality in 1887. Beyond lay Mortdale, too far from the city to be immediately developed, so this is a suburb of the 1920s, and Como, which became a weekend resort. Sutherland's timber industry benefited, while Cronulla became a weekend beach resort. When a tram from Sutherland was replaced by a railway in 1939 Cronulla subsequently becoming a suburb in the postwar era. Late nineteenth-century development is now mainly seen around the railway station and in the churches of the period. This was a whole new area for suburban development opened up by railway.

The Main Northern Line

The idea of a line to Newcastle aroused much debate: should it take off from Windsor or Riverstone, or nearer the city? Chosen was a line from Strathfield, rising with the Hornsby Plateau and crossing the Hawkesbury by a major bridge in its estuary. The possibilities of land speculation seem to have had a part in this choice.

Strathfield was already a wealthy suburb and the line connected Strathfield to Concord, which had been a riverside village and an early government farm. Subdivision began immediately in 1886 and continued for 40 years. Crossing the Parramatta River, Ryde was a village in the Field of Mars, with a church (1827) and police station: activity now shifted downhill to West Ryde where the railway station was located. Eastwood was an agricultural settlement, with some grazing, and large estates including the Eastwood House estate from which the station took its name. There was some new development and a school was built, but extensive subdivision lagged until the early 1890s when many Federation houses were built. Cheltenham received a station in 1898, when Charley's estate was subdivided with the stipulation that no commercial development occur round the station. It is unusual in this regard, a leafy, uncommercialised suburban

tract. The railway attracted some large houses at Beecroft in the 1890s, but development is mostly inter-war. No strong suburban development accompanied this railway at its construction.

The North Shore Line

The line from Sydney to Hornsby was built in the reverse direction, starting at Hornsby and terminating at a major ferry interchange at Milson's Point. Only in 1932 was the Harbour bridged, providing a direct rail and road link to central Sydney. North Sydney, reached by ferry, was laid out as St Leonards in 1836 and became a retreat for the well-off. Don Bank, a house of the 1820s, still survives, and suburban development was slow, with a church in 1843, a school of arts in 1859, and a courthouse and town hall in the 1880s, when a new Blackett Church was also built. The reach of the suburb was then extended by a cable tram to Crows Nest.

Railway development began with the line from Hornsby to St Leonards (now the name moved north) in 1890. It developed as a mixed suburban and orcharding district: Gore Hill cemetery became the north shore graveyard. To the north a string of suburbs slowly developed, their railway stations surrounded by commercial buildings, from 1890 to 1914. Artarmon was not given a platform until 1910 but Chatswood was a pre-railway village with subdivision in 1876 and a post office in 1879, so the railway merely boosted an existing development. Roseville, Lindfield, Killara, Gordon and Pymble were farming and orchard areas that began their suburban growth with the railway, as did Turramurra and Wahroonga, though Normanhurst was a pre-railway farm village. Here on the upper north shore, though there are some Federation houses, most development is inter-war. Hornsby, as the railway station and yards, benefited most, but to the north Asquith and other suburbs are post-1954 in their growth. The railway made Cowan a popular picnic spot.

The north shore grew as a group of upper-class suburbs, with little commercial or industrial development. Large houses in large gardens, with ample plantings of exotic trees and the preservation of much bushland, make this a distinctive residential landscape, now under threat from the very different tastes of 'new money' and government policies of medium density housing. Ku-ring-gai Council and local interest groups are waging a losing battle against market forces in attempting to preserve a privileged landscape, a task never undertaken by Willoughby Council.

Urban fringes

In any city there are certain activities which take place on the urban fringe, where land is cheap, resources plentiful, noxious effects are acceptable and waste disposal easy. Such fringe activities tend to be overtaken by suburban growth and their relics to become entombed within the mass. Overseas it has been recognised that cities grow in a boom and bust cycle, and the past 'fringes' can be recognised with the urban fabric as fossilised relics of past 'stillstands'.

Such fringe activities in Sydney's growth are of numerous kinds. Timber getting has left its mark on Fiddens Wharf on the Lane Cove River, and at Duffys Forest. Small farms for horticulture, dairying and pigs left small villages at Baulkham Hills, Bayview, Castle Hill

and Dural to become suburban centres. Large country estates of wealthy townsmen created Tempe House, Ashfield Park House, and Enmore House, now demolished. Georges Hall (1837) has become a convalescent home. The Showground, and showgrounds at Castle Hill and Fairfield, and the racecourses, were fringe activities built on cheap land, beginning with Canterbury in 1871. The water resource, now Centennial Park, Bankstown aerodrome, the garbage tip which held back the growth of Ermington, are all fringe activities now absorbed into suburbia. Quarries at the Dundas Valley and Prospect, the munitions factory at St Marys, the powder works at Elanora Heights, were all originally located in remote non-urban areas.

The search for the remnants of fringe activities and their relation to Sydney's pattern of growth is a subject for further research.

The inter-war period

The built expression of the 1920s and 1930s was the Californian bungalow and Art Deco, the latter best seen in the many pubs and some banks built during the period. In the 1920s there was a boom, leading to the Great Depression of 1929. Recovery was underway in 1934. Suburban growth filled in the wedges left between the old transport routes and the East Hills line was constructed, though most development here is postwar. ln 1919, local councils received clear zoning powers, which have been used to accentuate differences between various parts of the city. There was little new public housing, but Daceyville continued and Matraville was built, and there was slum clearance in Pyrmont and Alexandria. The Housing Commission was not formed until 1941 and had its great impact after 1945 in postwar reconstruction.

There was a decline in the inner ring of suburbs and decentralisation. As new suburbs grew, they surrounded earlier 'villages' sometimes based on a railway station, and infilled the urban fabric with Californian bungalows. In fact in the boom there was more subdivision than could be taken up for many years. Such new suburban growth typically had no sewerage system and the balance of amenities, such as hospitals, began to be seriously disturbed, as it remains today. The eastern suburbs saw a wave of apartment construction up to 3 storeys high in Bondi, Coogee, Waverley, Randwick and Woollahra. Growth also took place on the North Shore, stimulated by the Harbour Bridge. In the poorer areas, fibro made an appearance.

The postwar decades

Here the great fact has been an increase in population, coupled with the baby boom and massive immigration. Sydney has expanded beyond the possibilities of infill, to create vast new suburbs in the west, extending in a narrow belt to Penrith and the lower Blue Mountains; to the south-west, where a new city has engulfed Liverpool and Campbelltown; and in the north, where the Hills District, Ryde and the railway areas north of Hornsby have taken off. Provision of amenities lagged far behind. Particularly pernicious were the Housing Commission estates, such as Green Valley and Mount Druitt, where masses of houses were built with no social provisions beyond schools; urban deprivation was established in many of Sydney's western suburbs.

The immigrants tended to cluster at first in inner city areas, but also in growing Fairfield. Hostels of barracks type were built at Bradfield, Villawood, Hammondville, Leightonfield and also at Cabramatta. Immigrant 'ghettos' grew up: the Italians preferred Leichhardt, the Greeks Marrickville, with Yugoslavs interspersed. British immigrants were more widely scattered and spread across class. The tendency was for clustering by chain migration, but as newcomers accumulated funds, they bought houses on the western fringe, in Fairfield and Cabramatta. The latter became a centre of Vietnamese immigration. In the west the immigrants encountered a general problem of Sydney's expansion, flooding, which has not sufficiently been taken into account by planning authorities.

All this growth was to be influenced by the motor car and shaped by the County of Cumberland Plan of 1947, which set aside areas for residential and industrial growth and proposed a 'green belt' in Sydney's west to halt expansion and provide breathing space. The decentralisation of industry was correctly forecast. In the 1940s, manufacturing was strongly concentrated in a few suburbs between the city and Botany Bay. J McDonald Holmes mapped its various distributions accurately. Since then, there has been much decentralisation to larger sites in the outer suburbs. Meanwhile, there has been a great decline in the manufacturing workforce since 1974. Decentralisation has also reduced the importance of the CBD in shopping functions and now more than ever it is an office district with the rise of the finance industry. Government has continued to grow, but has decentralised some employment. The concomitant has been the rise of suburban shopping malls such as Roselands, the first, and the rise of older suburban centres, notably Parramatta and Chatswood, as retailing and office centres. The motor car has been the catalyst for cross-city movement and the freeing of suburbia from the mass transit lines. Trams disappeared in the 1960s and buses have taken up only a small part of the demand for mobility created by the structure of the city. Railways and buses are now the major public transport modes.

The preferred building material for this postwar boom has been brick, either double or brick veneer, often required by council ordinances. Speculative building to standard designs, but never side by side, has provided much housing, and apartments have multiplied, now known as 'home units' and subject to strata title. These have grown up in the eastern suburbs, on the northern beaches, around railway stations as at Artarmon and Rockdale, and in many scattered spots where councils have been amenable, as at North Ryde and Granville. A process of suburban 'defence' against these often-tenanted and therefore low status developments has drawn suburbanites together. A relatively new feature, prominent on the northern beaches and the North Shore, is the retirement village, as the population ages.

While the poor leave for the outer suburbs, 'gentrification' of the inner suburbs is occurring, first appearing in Paddington in the 1960s and now widespread. Both gracious old houses and workers' housing are renovated for a white-collar class seeking to be close to CBD or university workplaces and valuing the aesthetics and solid building techniques of old houses. This may spread beyond such fashionable places as Glebe and Balmain as the ageing disappear from a central ring appearing in the census

maps. Alternatively, medium-density housing may replace much central ring stock. RJ Horvath's *Social Atlas of Sydney*, reveals much about the population dynamics and planning possibilities of the next decades.

The outer ring

Sydney in the last 20 years has taken a firm grip on some outlying areas previously independent or specialised in recreation. Commuting now embraces a wide area from Wyong in the north to Leura and Blackheath in the west to Heathcote and even Wollongong in the south, though that lies within our Illawarra region. The Central Coast area of New South Wales is becoming one vast city or 'Megalopolis'.

To the south lies the Woronora Plateau, a sandstone upland that was of little use for either agriculture or grazing. Much of it was therefore available to be placed in the (Royal) National Park in 1872. While this was the world's second national park, its aim of providing active recreation together with the introduction of exotic trees and animals, puts it outside the true national park tradition. Much of this fringe area however is given over to true national parks, in which Sydney is fortunate as a city. Settlement has been confined to the main Sydney to Wollongong highway, with late suburban development at Engadine and Heathcote.

However, with increasing demand for water, and with the Lachlan Swamp and Botany Wetlands successively inadequate, the drainage of the Upper Nepean has been tapped to serve a distributive reservoir at Prospect. At first small weirs were built on the Nepean and Cataract rivers, with a tunnel to Prospect. Then in 1907, a series of large dams was commenced: Cataract (1907); Cordeaux (1926); Avon (1927); Nepean (1935); Woronora (1941); and Warragamba (1958). When this document was originally published the city was looking to the upper Shoalhaven for a supplementation of these dams, and Kangaroo Valley (Illawarra region) was potentially threatened.

The Southern Highlands

A corridor of lower, shaly land connects Camden with the Goulburn Plains, explored first in 1798 by John Wilson and Henry Hacking, who reached Marulan. Throsby and Hume completed its exploration before 1820. Oxley was running cattle at Bargo in 1815 before moving them on to Wingecarribee. The grazing resources of this corridor are limited and its chief function has been as a route to the interior.

The road first reaches Picton, after crossing the Razorback mountain and entering the hostile and infertile Bargo Brush. Major Henry Antill had an estate there, and the area was known for dairying and mixed farming. Picton first developed as a private town on Antill's land, but a government town was laid out in 1845. The railway arrived in 1863, and there was some growth, but it was bypassed on an easier grade in 1919 and the main road now also bypasses the town and the Razorback. Some coalmining employment helps support the present moribund settlement.

Beyond the Bargo Brush a village grew around Sutton Forest, a settlement of small farmers even in the 1830s. Mitchell's Great South Road, convict built, sweeps on past to reach Berrima, which he planned to be the capital city of the south-west in 1830. There

was a good water supply, and a large gaol was built in 1839 and a courthouse in 1841. The town made little progress; there was little good land about it, and the settlers on the plains preferred Goulburn as a district centre. Government gave way in 1855 and, while Goulburn flourished, Berrima became a road town with many inns. It was revitalised in the twentieth century by a coal mine and cement works, and the renewal of road traffic with the motor car. Now bypassed by the main highway it serves as a heritage pilgrimage town, its old landscape preserved because it was also bypassed by the railway.

An alternative route to the south-west ran under Mount Gibraltar from Mittagong, by way of Bowral and Moss Vale, to Goulburn. This was the route taken by the railway, which reached Mittagong in 1867 and Moss Vale in the same year.

Mittagong grew as a road village, with 2 inns in the late 1830s. It acquired increased importance with the opening of 'New Sheffield' in 1848, with the discovery of local coal and iron ore and using limestone from Marulan. A blast furnace and brickworks were set up and hopes were high for a colonial source of iron. This venture faltered and was wound up in 1857.

There were several subsequent revivals, in 1863 to 1866, in 1869 when bar and plate-making were thriving, and from 1876 to 1877 when cylinders were made for the bridge at Gundagai. In 1888 William Sandford took up the lease, but failed to make it work and moved on briskly to Lithgow. Perhaps it might have succeeded with an import tariff, but it never took on the scale of the Lithgow works, and the site remains are scanty. Mittagong survived chiefly as a road town, and as a suburb for the more working-class element in the district serving aristocratic Bowral.

Oxley had a 5,000-acre run at Bowral, which was subdivided when the railway arrived, including a town. The town, like Moss Vale, benefited from farming developments to the east, but also became a resort town for Sydneysiders seeking a more temperate climate. Large country houses were built on large areas of land planted with English trees, and such prominent Sydney businessmen as S Hordern, W Angas and JL Campbell had their country residences here. The town became a municipality of 1,200 people in 1886. A gasworks was built in 1889 and a reticulated water supply was provided in 1908.

Country retreats also included Moss Vale, though it was more of a farmer's town than Bowral, and the resort of Bundanoon. Moss Vale became a municipality in 1888 and acquired a water supply in 1894. Its cattle market was of some importance and the activities of the Fresh Food and Ice Company drew this area into the late nineteenth-century milk supply zone for Sydney. As a recreation area, the Southern Highlands properly fall into the functional pattern of Sydney's social development. Many private schools, notably Frensham for girls, can be found in this upper-class 'rural' area.

East of Bowral and Moss Vale lay the Yarrawa Brush surrounding the Wingecarribee Swamp and grazing on rich basaltic kraznozem soils. This dense rainforest was ignored by early pastoralists and thus lay open to small farmers after the Free Selection Acts of 1861. Robertson, its chief settlement, is named after the father of the Acts, Sir John Robertson. Clearing and burning the brush, settlers ran cattle and grew potatoes on

small farms and 30,000 acres had been selected by 1865. Private villages sprang up to serve them: Robertson in 1862, Kangaloon in 1864 and Burrawang in 1865. When the technology of dairying was revolutionised in the 1880s, this became a butter-producing region with many small factories, though eventually production withdrew to a central factory at Bowral in 1924, with most milk going to the liquid milk market. This is still a dairying area, with some beef cattle, but the many small farms have undergone amalgamation and the population has declined. The gap is increasingly filled by artists and hobby farmers and country retreats for city people. The whole area is now one vast recreational area for wealthy city people.

The Blue Mountains

The image of the sandstone Blue Mountains has varied over time. At first they were seen as a barrier to expansion, until crossed by Blaxland, Lawson and Wentworth in 1813, and a road made by Cox in 1815. The road has been realigned greatly at both ends (Blue Mountains City Council), but TL Mitchell's descent, the engineered Victoria Pass, is still in use. The mountains were then seen as a desert to be crossed on the way to Bathurst, with little water and a hazardous road running through useless and scrubby vegetation. Some travellers noted the magnificent scenery. Then, with the coming of the railway the picturesque and sublime images came to the fore; the mountains became a holiday resort. Finally, the mountains in the postwar period have become a suburb, with cheap land and long travelling hours. They remain however a 'lung' for Sydneysiders who can enjoy picnics and walking in the grand scenery of the Blue Mountains National Park stemming from a movement begun in the 1920s by Miles Dunphy and Mary Byles in particular. The first park area was declared only in 1959.

The railway crossed the mountains in the 1860s, using 2 zigzags, still visible though replaced by tunnelling. Katoomba did not at first benefit – it was a mere stopping place on the road; but it was given a railway station in 1876 and what had been 'crushers town', supplying stone for the railway, quickly became a resort, and a municipality in 1889. The railway advertised its attractions far and wide, and these were enhanced during the Great Depression of the 1920s and 1930s by much construction of paths and lookouts by unemployed men. Blackheath was another road village enhanced by the railway into a resort, though fruit growing was an activity on the adjoining Shipley Plateau. Mount Wilson was a high-class resort of private residences, to which a few wealthy people retreated to escape the summer heat of Sydney or Newcastle. Jenolan Caves were another mountain attraction, known in 1848, with major discoveries in the 1890s and early 1900s. Excursions from the railway at Mount Victoria were popular and accommodation was available at Caves House from the early 1880s, though the first stone building dates from 1897 and was added to in 1909. From desert to recreational area, the railway changed the image. Health too made the mountains attractive, far from the sultry and noisome air of Sydney; Bodington Hospital (Blue Mountains City Council) at Wentworth Falls and the Hydro Majestic hydrotherapy resort at Medlow Bath reflect this attraction.

The lower mountain towns shared this enchanted image, but developed less as resorts than as residential and recreational homes for the retired and wealthy. Sir Henry Parkes'

House at Faulconbridge illustrates this trend. Springwood, Blaxland, Lawson and Wentworth Falls are now within reach of many less wealthy people who work in Penrith, the western suburbs, or even Sydney, while the Blue Mountains has become a popular place for retirement and for second homes.

The Central Coast

The lower Hawkesbury is incised deeply in the Hornsby Plateau beyond Ebenezer with its early chapel. It is a stretch of water and coastline very little developed until very recently except for a fishing village at Brooklyn. A northern inlet, Brisbane Water, gives access to some useful land and to very good timber. The first settlers were there in 1820 and spread widely about the district – in 1834 there were 150 scattered just along Mangrove Creek. Timber getting led to shipbuilding, an important industry until late in the nineteenth century; though few traces have been seen they must be there for an archaeologist to find. The chief wharf site on Brisbane Water, at its head, was mostly set aside for small farmers, but there were some large estates such as Frederick Hely's 2,000-acre Wyoming. Reserves for public purposes were made during survey at Gosford, Terrigal and Kincumber. Shell was fired for lime and timber, cattle and vegetables sent to Sydney.

When Gosford was laid out as a government town in 1839, it already had a watch house, scourger and local magistrate. More successful initially was East Gosford, a private town laid out by Samuel Peeke. In time, government influences such as the post office brought the government town to the fore: by 1875 it was much the larger and the railway station in 1889 decided the site of the town centre. Until then access to Sydney was by water, or by road using first Wisemans Ferry. From the 1850s travellers used Peats Ferry.

Further north lay Tuggerah Lakes, collecting drainage from Ourimbah and Wyong creeks. Here was some early cedar, but large eucalyptus trees made the area a logging district: as clearing went on, cattle and dairy farms took over. There were many sawmills, mobile items with a few huts attached, but Yarramalong grew as the central village for the area. It was the last home of Edward Hammond Hargreaves, discoverer of gold. There was a great influx of small farmers as selectors from the 1860s. The railway created a new settlement, Wyong, which became the town for the district, replacing for many purposes the journey to Gosford. Wyong was a timber town and most of its buildings were burned in great fires in 1903 and 1904. The main street was rebuilt in brick in styles of the period, and saw 3 picture theatres added in the 1920s.

The railway brought much change to this district, making it easily accessible to Sydney through the 1889 Hawkesbury River Bridge. There were many new subdivisions, at Erina, Green Point and the 2,000-acre Gosford Model Farms in the 1880s and 1890s. The citrus industry, already established, expanded throughout the district. Wyong became a stopping place for amateur fishermen and holiday makers going to Ourimbah, Tuggerah Lakes and The Entrance, which was developed as a resort from 1920 and given a traffic bridge in 1934. Woy Woy became popular for fishing, boating and shooting with subdivision of Cox's estate in 1912. The Terrigal estate had been subdivided in 1900 and,

like Avoca in 1918, became another resort. The old shipbuilding villages, such as Davistown and Blackwall, declined. Electrification of the railway line in 1960 increased accessibility, and now this central coast region is developing into a commuter suburb for Sydney with lower land prices and a beautiful coastal environment. The early settlement pattern and the citrus and vegetable farms are disappearing under a sea of houses. Wyong is too distant for this to have gone far, and it has been bypassed by the new expressway to Newcastle: new retirement suburbs such as Bateau Bay are springing up on the coast in this district.

Shipwrecks

While Sydney Harbour, Botany Bay and the Hawkesbury offer shelter to ships in storms, this is a dangerous coast with storms and onshore winds for much of the year. Not all ships have made it to safety. The *Kiama* off the Entrance and the *Hall Caine* and the *Valiant* off Toukley testify to the lack of safe easily accessible harbours to the north. Many ships, of which the immigrant ship *Dunbar* is best-known, lie wrecked in failed attempts to enter Sydney Harbour; the *Woniora* and *Hilda* lie off Botany Bay. These vessels, representing a wide range of naval architecture, commercial activity and on-board living conditions, provide a rich research field for marine archaeologists.

Conclusion

The growth of a city of several million people is a complex process not easily summarised. Pattern overlays pattern, yet some logic can be seen in the influence of transport in the sorting out of workplace and residence, and in class differentiation. Buried within the present urban fabric are layers of earlier growth, not yet overtaken by renewal, which must proceed if Sydney is not to spread as a continuous built-up area as it now shows signs of doing, with only national parks as barriers – they now substitute, along with the Nepean water catchment, for the 'green belt' of the County of Cumberland Plan. The state government hopes to halt this sprawl with medium density housing, which on a large scale will call for sensitive heritage policies conserving not only single buildings but whole residential districts.

Meanwhile the metropolitan area's growth continues to be governed by the outline plan of the 1960s (Report 1968). The aim has been to divert growth into urban corridors, to the south-west to Campbelltown, Appin and Camden and to the west, including Blacktown, Mount Druitt and Penrith. These corridors are now filled, albeit at a lower density than originally planned. When this document was originally published a new north-west corridor was to be opened with the Rouse Hill–Maraylya development of some 400,000 people, but without the railway line envisaged in the original report. Gosford–Wyong has taken much overspill, as planned, and the Blue Mountains have become a commuter zone.

Planning for growth, both residential and service-industrial, in the difficult terrain around Sydney has been directed by the corridor concept that allows refuges of open space for functions such as transmission lines, sporting venues and a new international airport at Badgerys Creek.
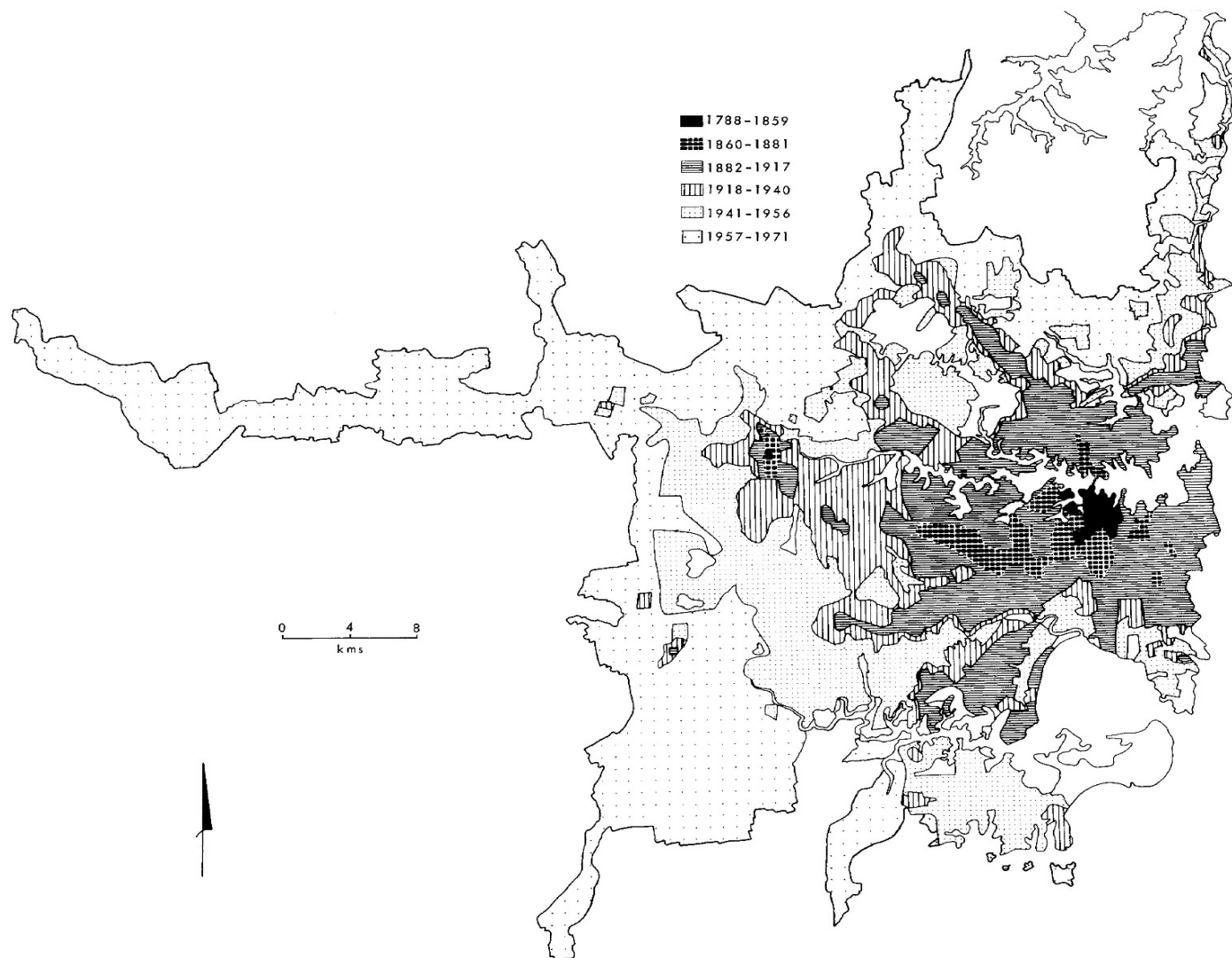
Figure 1 **The successive growth of the built-up area of Sydney, 1788 to 1971. Source: DN Jeans and P Spearritt (1981) *The open air museum, Sydney***

Figure 2   **The growth of Sydney's railway system. Source: DN Jeans and P Spearritt (1981)** *The open air museum,* **Sydney**

2. Lower Hunter

To the south is a rugged plateau, cut in sandstone mainly, with streams (like Wollombi Brook) flowing northward to the Hunter. There is little land for grazing and agriculture. This gives way to the hilly Lake Macquarie Shire, with level land developed for agriculture and low swampy ground around Dora Creek, Cockle Creek and Wyee Creek and in the Redhead-Swansea area. Here are large areas of poorly drained tidal flats carrying mangroves.

To the north lies the lower Hunter Plain, dominated by the extensive alluvial flats of the lower Hunter, Williams and Paterson rivers, attractive to early settlement. Land between the rivers on the solid geology is mostly developed farmland for dairying but increasingly for beef cattle. The mouth of the Hunter requires constant dredging, but the port can accommodate very large bulk carriers.

An extensive dune barrier marks the sea coast from Newcastle to Port Stephens which is an undeveloped natural harbour. There is much swampy land around it.

The centre of the region is developed on Upper (mined early) and Lower (mined from 1900) Coal measures which provide the mining and industrial character of the region.

Local government areas

Cessnock, Lake Macquarie, Maitland, Newcastle, Port Stephens

Map 8   **Local government areas and boundaries of the Lower Hunter historic region**

Introduction

This region is characterised by the important role of river navigation in establishing its settlement pattern and by the dominance of coal in its economic life. As a colliery and concomitant industrial region it is unique in Australia, but characteristic of many rich regions in Europe and the United States.

An escaping convict, William Bryant, was the first European to reach the area. Then in 1797 Lieutenant Shortland noticed coal deposits along the Hunter River and James Grant explored its lower reaches in the *Lady Nelson* in 1801. At that time a penal settlement was required for re-offending convicts and a settlement was attempted at the mouth of the Hunter but failed through lack of administrative efficiency. It was reoccupied in 1804 after the Castle Hill rebellion and by 1820, at its peak, 1,200 convicts were undergoing sentence there. Convicts were employed in coalmining, cedar-getting, lime-burning from local Aboriginal middens, and salt-boiling using cheap coal. There were convict barracks, convicts' and officials' houses, a church, mines and various workshops: the remains of a workshop were found in 1987 and have been the subject of an archaeological investigation. Cedar-getting involved exploring the rainforest-clad banks of the lower river, and outstations were established at Wallis Creek and on the site of Raymond Terrace.

The risk of convicts escaping became greater once communications by land to Sydney by way of the Upper Hunter (Newcastle City Council 1991) were established, while the growth of settlement placed pressure on the government to open the Hunter Valley to settlement, a decision taken in 1820. Most of the convicts not assigned to the Australian Agricultural Company's mines were removed to Port Macquarie by 1823. By 1823 there were already 13 private houses, 71 convicts' houses, and a barracks when Henry Dangar drew up a plan for the town of Newcastle (Callen 1986). The settlement continued as a mining village dominated by the company until its monopoly on coal was broken in 1849. Then began a period of expansion and prosperity as cheaper coal led to more exports, as California became a significant export market, and as local industry expanded. In 1859, Newcastle became a municipality.

Agricultural development

Meanwhile, settlers had exploited the rich alluvial soils of the lower Hunter and Williams and Paterson rivers. Thirteen ex-convicts had been allowed small farms at Wallis Plains during the convict era and had supplied Newcastle with fresh foodstuffs and the timber-getters had reported good land elsewhere. On the south bank of the Hunter a strongly Irish Catholic small freeholder farming community grew up. On the north side large estates employed convict labour in agriculture but also let to tenants, a practice which expanded greatly with the ending of private convict assignment in 1840. Only the poorer land back from the rivers was used for grazing cattle and timber-getting.

The Aboriginal people were weakened by disease and poverty. The Newcastle magistrate in 1845 reported them much decreased, having given up the traditional life for begging with some hunting. Some worked as stockmen and ship's crewmen, but the

Aboriginal mission under the Rev Lancelot Threlkeld at Lake Macquarie had failed to persuade them to take up agriculture.

The early farmers grew wheat, maize and vegetables and tobacco, which enjoyed a boom in the 1830s and 1840s; in 1844 333,000 lb of tobacco was shipped to Sydney, but the quality could not compete with increasing imported supplies. There were vineyards particularly associated with the pioneer James Busby and James King of Irrawang, and in 1846 the Hunter River Vineyards Association was formed. Most members were on the north side of the river where capital and an improving spirit contrasted with the conservative mass on the south side.

Floods in 1857 and the early years of the 1860s had 2 effects. First, many tenant farmers left the Hunter for the Manning River where they could obtain freehold land for about 6 pounds an acre compared with 20 to 30 pounds on the Hunter. This began that long trek northward which eventually encompassed all the northern river alluviums. Secondly, as on the Hawkesbury, humid seasons brought heavy rust in wheat, which was given up and many flour mills abandoned. Maize became the stable crop as on the Hawkesbury. But it paid little and dairying eventually became the mainstay, especially after the technological revolution of the 1880s and the establishment of Ireland's butter factory in Newcastle. The city also supplied an outlet for liquid milk sales. Vegetables, especially potatoes, pumpkins and cauliflowers continued to be grown for the Sydney market, and much lucerne hay. Vineyards from the 1880s shifted south to the Pokolbin where sandy and loamy soils were more suitable, and to the lower Wollombi. An influx of German settlers was important in this re-establishment of the industry. By 1922. there were 2,643 acres of vineyard, but in the face of South Australian competition the industry declined to 823 acres in 1960, since when there has been a marked revival with growth in demand for quality wines. The river flats continue in intensive cultivation, but dairying has given way to beef cattle and hobby farms on much of the solid geology.

The role of the river

In the early period the river was the chief form of transport in this region. Shipping provided easy access to the Sydney market, to overseas markets for coal, and boats on the river made contacts with towns and butter factories easier. Now, rail and road have replaced shipping, and the rivers have much silted up due to clearing of the land and increased soil erosion.

To reduce the cost of expensive land transport to a minimum, the point of head of navigation is the crucial one in a river system. Newcastle, isolated from the rural districts by a long barren stretch of road, early persisted only as a mining village and point of export for coal. The significant ports developed upstream. At the head of navigation of the Williams was Clarencetown, planned in 1832, which built ships with ample local timber, including the steamship *William IV*, but had little good available land to encourage its development. Hinton also had a wharf and was established as a private village in 1840 with a church and school. By 1866 it had a population of 200, with 3 churches and a school of arts. Raymond Terrace, at the junction of the Williams and the Hunter was a key location for an extensive area of farms (Newcastle City Council 1991):

it was planned beside the wharf in 1835, and soon had a courthouse, flour mill and school. Many small farms around it grew wheat, maize, vegetables and vines and there was extensive grazing of cattle. Its flour mill was later replaced by a butter factory and it remained a rural service centre after the decline of shipping. It was revitalised by a masonite factory in 1938, Courtauld's textile mill in 1954 (both have ceased operation) (Newcastle City Council 1991) and increasing suburbanisation in recent years. The commercial centre of the town has shifted from the old wharf site to the main road north. Paterson is built at the former head of navigation on the Paterson River, as a private town, but little remains to indicate its former port function.

A town began to grow early on the site of West Maitland where freehold land had been granted to the ex-convict farmers at a point where deep water adjoins the levee bank. The river was formerly navigable to this point, and the road from Newcastle to the upper Hunter provided the main street. By the mid-1820s West Maitland had 50 houses and 400 inhabitants, but its flood-prone site led some residents to petition for an alternative site. Consequently, Sir Thomas Mitchell laid out his most imaginative town plan, that for East Maitland, on a ridge near the existing town, and to encourage its growth, government services such courthouse and post office were located there. In 1841 the gaol was completed. The site failed, however, to attract townspeople, largely because of high land prices and lack of water. Meanwhile, a northern local site was developing; by 1829 the store ship *St Michael* was moored at the site of Morpeth where deep water provided anchorage above flood-free ground. This was the estate of EC Close, which he laid out as a town in 1832. Shipping goods there meant avoiding the then tortuous meanders which took the river up to West Maitland. So, a 3-cornered metropolis evolved. West Maitland already had 2,768 people, and in 1861 7,747, while in 1861 Newcastle had only 3,722. This flourishing triangle dominated the urban structure of the Hunter Valley, East Maitland being incorporated in 1862, West Maitland following suit in 1863 and Morpeth in 1865.

As a rural centre West Maitland enjoyed the boom years of the 1880s and has many fine buildings from that period. By that time however its great days were already over: the railway reached the town from Newcastle in 1858 and, as the railhead moved inland, traffic increasingly passed through to the deepwater port of Newcastle. Morpeth declined much more drastically than Maitland, especially when the Hawkesbury River Bridge was opened in 1889, allowing rail traffic to compete on the through route to Sydney. Shipping continued to Morpeth until the 1950s, but its day as the second port in New South Wales were long over.

East Maitland was provided with a reticulated water supply in the twentieth century as a suburb of Maitland. West Maitland survived, particularly boosted by the development of the Cessnock and Maitland coalfields for which it became the commercial centre. Much beset by floods, it had expanded westward on flood-free ground at Telarah and Rutherford. New industries such as Bradmill were located there. In 1901 it was supplanted by Newcastle as the chief town of the Hunter Valley, with a population of only 11,052, compared with Newcastle's 50,000. Much reshaping of the town and its surrounding lands has been undertaken for the purpose of flood mitigation. It remains

the centre of the Catholic diocese, with the Anglican diocese centred on Newcastle, though the Anglican bishop's residence was for long at Closeborne, the regency mansion which is now a conference centre, built at Morpeth by EC Close.

Coal

The Hunter Valley dominated Australia's bituminous coal production until the 1970s. The first field found was around Newcastle, and only late in the nineteenth century were the Cessnock and South Maitland fields opened up. The coal measures dip southward into the Sydney Basin and run under the sea, where they have been mined as at Catherine Hill Bay, an abandoned colliery deserving investigation. In the Newcastle Field the upper coal measures of Permian Age comprise the Borehole and Victoria Tunnel seams and provide good coking coal. Around the Lochinvar Dome to the west the Greta seam provides good gas-making coal. This is a difficult field for underground mining, with faults, dykes, thick seams and steeply dipping strata.

Early mining began around Newcastle, which is built over a honeycomb of tunnels. With the exhaustion of this coal easily accessible by adit and shaft, mines spread out, west, north and southwards, creating many mining villages and a network of private railways centred on the port (Docherty 1983). As Newcastle has grown, it has absorbed these villages as suburbs – Adamstown, Hamilton, Merewether, Lambton, New Lambton, Wallsend, Wickham, Redhead, Belmont, Swansea and Charlestown. Most survive as shopping centres within the suburban mass, and present chiefly timber houses. The southward movement of mining led to the end of power generation in Newcastle. Large coal-powered stations were built on Lake Macquarie beginning with Wangi Wangi in 1956 and included the Vales Point, Munmorah and Eraring stations. Lake Macquarie and its adjacent seashore have become a commuter and retirement extension of Newcastle.

On the Cessnock and South Maitland fields, settlement assumes a linear form that extends along the line of outcrop. It leads from East Greta to Bellbird and comprises East Greta, Hebburn, Greta, Kurri Kurri, Stanford Merthyr, Pelaw Main, Weston, Abermain and Neath. The names suggest the origins of miners in South Wales. But the mines have been controlled by a small group of companies in an industry marked by poor employer-worker relations in which the great strikes of the 1890s are just one episode. Here the collieries are larger than on the Newcastle field; in their heyday they produced between 500 and 1,000 tons of coal per day.

There are many small villages, such as Bellbird, Kitchener, Paxton and Kearsley, providing workers for one mine, but also some larger centres. One of these small villages was Minmi, where mining began in the 1840s but closed down in 1924 after a strike.

The proving of the Greta Seam by TW Edgeworth David in 1886 brought new prosperity to Cessnock. The area was an early grant exploiting timber and supporting a vineyard, and by the 1850s there was a small village with a police station and lock-up and an inn. A steam timber mill was installed in 1884, but the timber was not of the best quality. The first shaft was sunk in 1891 and a private railway built to West Maitland. In the early decades of the twentieth century the large Aberdare Extended mine was established in

the centre of the town and local mining expanded. Population skyrocketed. From 165 in 1901 it had grown to 7,243 in 1921. The town became a municipality in 1926.

Kurri Kurri was laid out as a government town in 1902, as a residential centre for the Hebburn, Pelaw Main and Stanford Merthyr and Richmond Main collieries (Newcastle City Council 1991). It also acquired a timber mill and brickworks. Abermain was a town that mushroomed with colliery development after 1903.

Most mines are now closed, and Hunter Valley coal now comes from the Singleton-Muswellbrook area, from cheaper open-cut mines. However, as Newcastle's Manager of Strategic Planning was eager to point out, 'development of several first-class tourist resorts and vineyards, as well as the aluminium smelter at Kurri Kurri has provided an increasing alternative employment focus for the residents of Cessnock and surrounding areas. Many miners transferred to other underground collieries in the Lake Macquarie area as well as the Upper Hunter open-cuts while maintaining their Cessnock residences and are comparatively prosperous' (Newcastle City Council 1991).

Newcastle

Rising coal output and the railway made Newcastle a major city. However, developing communications affected its ability to compete with Sydney. Its capacity to serve the inland was reduced by 2 events; the through railway to its rival city and the failure to build a line through the Cassilis Gate to Ulan until 1982 (Newcastle City Council 1991). This process of development in communications also confirmed Sydney's dominance of the whole of the state.

By the time it became a municipality in 1859 Newcastle had some further industry. This was notably in shipbuilding and associated activities such as ropemaking and consumer goods. The railway's increased importance was recognised when a new station was built in 1878. In 1895 it was upgraded to its present grandeur. By 1890 Newcastle was exporting over 2 million tons of coal a year. The larger ships were also used, since they could not get up to Morpeth.

Plentiful and cheap coal, together with mineral discoveries elsewhere in Australia gave it a new impetus in the smelting industry. Copper was smelted at Burwood from 1853 to 1886. Copper and tin were smelted at Port Waratah from 1868 to 1893, and copper again at Broadmeadow from 1872 to 1894. Cockle Creek smelted silver, lead and zinc from 1895 to 1922. Copper, gold and silver were smelted at Tighe's Hill from 1907 to 1911 and antimony at Mayfield in 1911. These new industries provided a major boost to a town developing the manufacturing industries inherent to a growing population. Manufacturers produced aerated waters, agricultural implements, bakeries, biscuits, bricks and tiles, chemicals, coachworks, engineering, soap and candles, fell-mongering, flour mills, furniture, printing and wool washing.

Buildings kept pace with this growth, and many notable examples survive. The stone harbour was made in the 1860s and Barnet's Customs House dates from 1877. The old Anglican cathedral, now a hall, was built in 1885, while Fort Scratchley is a product also of the 1880s. So are some solid office buildings and hotels. Although the new Anglican cathedral was completed in 1970, it had been opened in 1902.

Newcastle's history as a smelting centre was clinched by the decision of BHP to open an iron and steel works. It was completed in 1915 and immediately boosted by the demands of defence. Local coal, at 3 tons per ton of ore brought by ship from South Australia, with some limestone from Tasmania, made this a national and rational site. Availability of steel attracted fabricating plants, such as engineering, galvanising, rail-making, fencing and wire, and the making of firebricks and slag cement. Paradoxically, given this new large-scale industry, Newcastle was reasonably prosperous in the inter-war years which saw most of Australia plunged into depression. The clothing industry grew at this time, providing some employment for women, always scarce in the Lower Hunter. The State Dockyard, which opened in 1914, was sporadically active.

Newcastle's growth led to a demand for fresh water. This came from the Hunter River at Walka from the 1880s until the Chichester Dam was commissioned in the 1920s (Newcastle City Council 1991). The Tomago sand beds were brought on line just prior to the Second World War. The Grahamstown scheme has been the major source of water since the 1960s (Newcastle City Council 1991). Building the Stockton Bridge in the 1970s made this area more accessible to Newcastle, mainly for recreation. Nelsons Bay and Anna Bay on Port Stephens are popular resorts rejuvenated by the bridge.

Newcastle has not been a flourishing centre in recent decades, and this is particularly true of its central business district, which has a low profile untypical of large cities. While this has remained an industrial centre, the new high-technology industries have not been attracted and its own industry is not in need of large downtown office blocks. Central Newcastle therefore remains a good example of a city centre of the 1920s, without the tower block development that has destroyed most of Sydney's CBD landscape of the pre-1940 era. Indeed, the more vital development at the more central Charlestown, in the Lake Macquarie City Council area (Newcastle City Council 1991). challenges the commercial use of the CBD.

The Lower Hunter region has its rural fringe in which dairying and timber getting are in decline. Only the remnants of a few rural villages indicate a once-dense small-farm population.

Conclusion

The Lower Hunter region is one of the few areas of Australia that resemble the declining coalfield-industrial regions of the developed world. Like most of those regions, it suffers from declining coal reserves and cheaper open-cut coal, and the declining importance of heavy industry. Yet Newcastle is an old town, and although many fine heritage buildings were damaged in the 1989 earthquake, many nineteenth-century buildings remain.

3. Upper Hunter

This region comprises the area draining to the Hunter, via the Hunter itself, the Goulburn River and Dart Brook. It is bounded on all sides by steep rugged country, except in the far west where the Cassilis Gate gives access to the interior and is met by the Ulan Railway to bring coal to Newcastle. Southward is dissected plateau country, to the north and west are the Liverpool Range and Barrington Uplands. Formerly entirely rural by contrast with the Lower Hunter, open-cut coalmining has recently developed here on a large scale, affecting the towns of Singleton and Muswellbrook.

The Hunter Valley plain lies at the centre of the region, from Singleton to Scone and Murrurundi, a broad belt of lowlands 15 kilometres wide containing much alluvial land. This mainly consists of open undulating grassland and level alluvial plain, which also occurs along the Williams River.

To the west is the Merriwa plateau, composed chiefly of rolling fertile basalt country, served by Cassilis and Merriwa. Streams mostly flow south from the Liverpool Plains to the Goulburn River incised in the sandstone to the south.

Local government areas

Dungog, Liverpool Plains (part of), Muswellbrook, Mid-Western Regional (part of), Singleton, Upper Hunter

Map 9   **Local government areas and boundaries of the Upper Hunter historic region**

Introduction

The Hunter Valley was one of the first large stretches of suitable pastoral land found early in the colony's history and after its opening to free settlement in 1820 was quickly taken up. Wood supplied for mills and catchment areas is from the thickly timbered area above the line of 80 general slope. This takes up about half that space. The remainder is used fairly intensively, especially the narrow strip of alluvium that widens out at Patricks Plains and again at the head of the valley. Other good soils are the basalts of the Merriwa Plateau. This valley served as a hearth area: the lower river agriculturalists bred the farmers who moved to the North Coast: the interior bred the sheep and cattle that occupied inland northern New South Wales.

The major evidence of European occupation lies in the widespread environment. Dense timber has been felled in accessible areas; large regions of open forest have been

ringbarked and thinned, and the alluvia cultivated and irrigated. Native grasses have been widely replaced and altered by selective grazing. Much of the country suffers from soil erosion, so that rivers and creeks have silted up and floods may be more severe than in the past.

Since some 70% of New South Wales suffers from soil erosion, this is not a theme that can be systematically duplicated region by region. The steady destruction of Australia's environment by its users, which today cannot be explained by ignorance, is the chief heritage of the past in New South Wales.

The discovery of the Hunter River was partly from the downstream government enclave – Colonel Paterson in particular is said to have reached Patricks Plains – but also overland from other settled districts. William Lawson found the Goulburn River from Mudgee in 1822 and, after a number of attempts, John Howe, Benjamin Singleton and others found a route from Windsor in 1823, approximately the line of the Bulga Road. Stock could now be overlanded from the crowded Cumberland Plain.

There were already Aboriginal people in possession, but they were driven off and absorbed as hangers-on about the stations. One of the pioneers of pastoralism on the Hunter, Robert Scott of Glendon, wrote 'They must be taught a sharp lesson at the first collision. Only force can keep such people in check. They cannot be civilised or tamed, and those with some acquaintance with British ways are most to be feared.'

The opening of the Upper Hunter began at Patricks Plains where Singleton grazed stock and grew wheat and maize. Others soon followed in a great rush fed by the free and wealthy immigration of the 1820s, though land had to be bought after 1825. By then however, under the old land for capital scheme, over 360,000 acres of Hunter Valley land had been granted. By 1828 there were 50,000 sheep and 11,000 cattle, grazing at the then estimated rates most of the alienated land.

This was a gentry settlement, including such rich settlers as Bowman, Chief Justice Forbes at Edinglassie, Dickson, Carter, Mills, Ogilvie at Merton, the British parliamentarian T Potter Macqueen with his 25,000 acres at Segenhoe, a mixture of Sydney merchants and graziers, and retired military officers seeking to establish a squirearchy. Only the waterfrontages were alienated, as Mitchell's map of 1834 demonstrates. The back country was leased or even grazed illegally by those who held the water.

The basic unit of settlement had been developed in Cumberland, and here showed its adaptability for settling the pastoral lands. There was a central headquarters on the run, furnished with a good house when time permitted, but certainly a woolshed. In a ring around this, strategically occupying all the land, were outstations with shepherds and hut keepers, moving the sheep over the natural pastures. One shepherd could guard 600 sheep, but more men were required to cart provisions and carry wool down the country and cart materials and provisions on the station itself. At first the system relied on assigned convicts, but when these were withdrawn in 1840, free men were employed, supplemented by Aboriginal people. There were some Chinese brought in as shepherds. Drays pulled by bullocks carried 250-lb bales of wool down to Morpeth for shipment to

Sydney. By 1830 the stocks were spilling westward and the Merriwa country was occupied. By then the first Hunter pastoralists had crossed Liverpool Range by Henry Dangar's route at the head of Pages River and were into the Liverpool Plains. At this point the 'limits of location' were fixed in recognisable form, making such an incursion illegal.

Lying within the limits, the inner Hunter was provided with towns. When TL Mitchell built his Great North Road, he intended one branch of it to point to the Upper Hunter at Leamington, a grand town never built at Jerrys Plains, a small village later recognised by a less ambitious plan. The other branch, completed, went to Maitland. The road still stands along many stretches in the sandstone country between Sydney and the Hunter, by ways of Wisemans Ferry. Shipping was cheaper than land transport and was replaced by the railway. The remaining roadworks stand as fine examples of convict stonemasonry.

The real capital of the inner Hunter grew up not at Leamington but at Singleton. Here on Patricks Plains 2,000 acres of wheat were grown on alluvial soil in the 1830s, and vines and tobacco were major crops. Tobacco continued to be grown here into the 1890s, and Singleton had 2 'factories', which may merely have cured the leaf for shipment. Here was the crossing of the Hunter on the road that led from Maitland up the country through Lochinvar. Benjamin Singleton took up his first land at Neotsfield, a pastoral holding, but soon moved to the ford and established an inn and punt to serve the increasing traffic. From 1836 he sold town lots from a plan quite dissimilar to the grid pattern of the government towns. By 1841 the site held 431 people, a flour mill, and 2 of the 11 boiling downs the pastoralists resorted to in the depression of the 1840s were located here. Brewing was established in 1845, by which time there were Presbyterian and Catholic churches: an Anglican church was built in 1851. In a secular age it is easy to underestimate the establishment of churches for a population that despite its reputation for profanity was also deeply religious. Churches were a sign that the 'respectable' classes had made their appearance in a town or place.

Further upstream Muswellbrook became an urban centre, given a plan in 1833. By 1841 there were 215 people, and a post office had been established. The name was officially changed from Mussel Brook to Muswellbrook in 1839. This was chiefly a road town and an official centre for magistrates, mounted police and government functions and grew only slowly. But it did have a steam flour mill in the 1840s and a Temperance Hall, signs of merchant activity. Surrounded by large estates, it did not have the growth potential of Singleton.

The service centre for the upper valley, much under the thumb of the Dumaresqs, was Scone, earlier named Invermein. The Scottish influence is clear. The official town was renamed Scone, and already had a hospital in 1834. Dumaresq put on tenants who grew wheat and supported the town.

Aberdeen was laid out at a ford at the Hunter River largely at the insistence of Potter McQueen to aggrandise his Segenhoe estate, in 1838. It relied on road traffic and estate workers, and in 1840 had an inn and a steam flour mill which precariously survives. Murrurundi was another road village at the edge of the Settled Districts – Liverpool

Range prevented it from serving the country beyond, as Yass did in the south – but it was laid out in 1837 and by 1846 had 52 people, inns, stores and 3 churches, The other minor service centres were founded later, Wingen in 1855 and Broke in 1860.

Only against the stubborn resistance of the landowners were Cassilis laid out in 1835 and Merriwa in 1840. The pastoralists wanted no inns to distract their workers from hard labour. TL Mitchell insisted however that a courthouse and police station must always be located within a town plan, so that these 2 'towns' were set up with those buildings from the start. In a country with few people they acquired few services, an inn and a store being their mainstay until 1850, but which time both had schools also.

The gold rushes did not impinge directly on the Hunter Valley, though they increased the price of meat and drew off labour. They also created a demand for wheat and small farms, so the better soils on some estates were subdivided into tenant holdings. The small farmer thus got a foothold. It was not until the 1890s that gold was actually found within the valley, at Stewarts Brook and Woolooma, which gave a temporary bustle to the town of Scone. The democratic constitution of 1858 overthrew the gentry's power in New South Wales and, for the most part, the Upper Hunter pastoralists withdrew to their estates. One exception being Sir John Robertson who, unusually, was on the side of democracy. He introduced 2 bills for 'unlocking the lands', the Crown Lands Alienation Bill and the Crown Lands Occupation Bill of 1861. They cut the political base from under the gentry's allies, the squatters. And indeed the Hunter gentry also suffered, for most of them had squatting runs beyond the boundaries of which the freehold Hunter station was a secure base. The Ogilvies, for example, had land on the Clarence and Richmond rivers, where they had been pioneers reaching out from Merton.

The Hunter pastoralists were thus often preoccupied by the need to secure their outlying runs from free selectors after 1861, but most did so successfully and the profits continued to flow in to support the gentry lifestyle. The invasion of selectors found the best land on the Hunter in large freeholds, and only the hilly fringes were so taken up, about 20,000 acres. But small farms continued to make headway on the estates as the profitability of renting increased – one estate was subdivided into 227 tenant farms. Wheat could still be grown profitably in the drier areas upstream, even after the climatic disasters of the 1860s, but maize became the more usual crop. As on the lower river, many tenants left in search of freeholds on the coastal fringe. There was a return to sheep and cattle as the mainstays, and horses became a major output in the Weddin Valley and Kingdon Ponds areas. Racing became a favourite pastime.

Singleton lost its flour mills but became an important stock market from which the animals were driven to Sydney. The railway in 1863 made it a more important collecting and sales centre, while dairying and vines – 513 acres in 1860 – took over the alluvial flats. Singleton became a municipality in 1866. Its activities represent those of a thriving country town in the late nineteenth century. Manufacturing included soap and candles, tinware, 4 furniture manufacturers, blacksmiths, wheelwrights, carriage builders, a foundry and a tinned meat works. A gas works provided street lighting in 1883. A volunteer fire brigade was founded in 1886, and a reticulated water supply began in 1882. It was well provided with churches, masonic hall, temperance hall, school of arts

(though no public library until 1961), Oddfellows hall and all those imposing institutions with which the nineteenth-century bourgeoisie endowed their fellows. Singleton least of all, was dominated by surrounding owners of large estates.

Similar improvements were made elsewhere. Scone municipality was established in 1888 the railway had arrived there in 1871 – and many small tenant farmers made this a progressive centre. Races were still held on the estates, but the town went in for improvement, arranging for garbage disposal in 1889, planting an ornamental park, introducing kerbing and guttering in 1891, lighting the streets in 1896 and generally exhibiting all the signs of an 'age of improvement'. Muswellbrook similarly built a hospital in 1857, a school in 1862 and a town gas supply in 1894. Urban amenities came to the country towns in the second half of the nineteenth century and the pioneering phase was well over in the Hunter Valley. It is true that the lesser towns stagnated, stranded in an inhospitable and trafficless countryside where the estate owners wanted no tenants and clung to their merinos. These did not benefit much from the great boom of the 1870s and 1880s, in which Australia was awash with British money, which rebuilt whole main streets that now dominate the scene with their neoclassical banks and shops, urned and scrolled and balustered in the most elaborate fashion.

Much of the improvement in the Upper Hunter came from the lead of the estate owners, and not merely from the urban bourgeoisie, which makes this an unusual area. Eldred Grigg has drawn attention to the 'estate paternalism' that persisted in the area until about 1914. The estate owners lived in big houses and aped the English squirearchy in their paternal approach to their tenants and workers, for whom they gave 'harvest festivals' and built churches in the English manorial style. They were often able to do this because their incomes included a large non-pastoral component. This was so for Whites of Belltrees. The notion of a responsible landed gentry persisted here longer than elsewhere in the colony.

In the 1890s this was still then the domain of the large freehold estate. Fourteen men held 227,000 acres between them, of which only 331 were cultivated. Ringbarking and fencing had increased profits and reduced the labour force on the finest country where cultivation by tenants was not an option. There was however a reassessment of the alluvia, partly caused by the railway, partly caused by the new dairy technology developed at Kiama in the Illawarra region. This land was now let or even sold for dairying, which became the twentieth-century mainstay. Nearly a fifth of the valley's surface is suitable and this served butter factories, many and widespread in the earlier phase, but soon settling on the main towns – Singleton, Muswellbrook, Aberdeen and Scone – with the coming of the hand separator and the central refrigerated factory serving the export market. The Goulburn Valley and the Merriwa Plateau, without rail access, stuck to merinos and looked westward to Mudgee rather than eastward.

Dairying began the subdivision of the large estates, though there was some contraction as small farmers withdrew from the remote and infertile uplands. The subdivision was continued by a shift from wool to beef, which paid higher rents on pastures increasingly improved by the introduction of phalaris, superphosphate and aerial topdressing. Rising land prices made it tempting to sell up the large estates. They were beset by the rising

price of labour, resumption for subdivision by government, and soldier settlement that took much of the land on the sound side of the river from Singleton to Denman after the First World War. The effects of soldier settlement were felt around Scone and on the Merriwa Plateau after the Second World War when the country was cut up into wheat–sheep farms. Fat lambs have replaced wool production as the chief revenue where sheep remain. Meanwhile, the Upper Hunter Region now supports mainly dairy farms up to 500 acres, and beef cattle properties up to 2,000 acres, or wheat–sheep farms of slightly larger size. The twentieth century has swept away the paternal estate mode of production and society that existed up to 1914.

Scone may be used to illustrate the urban change of the twentieth century. Saleyards were established in 1905 (rebuilt 1973), after the town had shown its civic spirit by accepting Mr Cook's donation of a Federation Memorial Fountain. A fire brigade was established in 1925, and a reticulated water supply in 1930. Sewerage was supplied in 1930, and an aerodrome at Nandoura in 1938. An ambulance station was established in 1936. Electricity was run through the town in 1920. Again, this may be taken to represent what was going on in most country towns in the inter-war period despite depression: a second phase of supplying modern services that parallels that from 1860 to 1890. The progressive country town is acquiring the services hitherto confined to city dwellers.

Aberdeen was sunk in the depression in this period. Its meatworks, set up in 1892, mostly closed for want of overseas markets, so unemployed returned soldiers were given a tent camp to live in with their families. Muswellbrook undertook similar improvements to Scone. This was largely because employment was maintained in the coal mines opened in the 1920s. Also, with the absorption of the Upper Hunter into the liquid milk supply system, its factory became the chief collector of milk from the middle and Upper Hunter. Singleton also benefited from the shift of coalmining from the Lower Hunter Region and enjoyed a similar growth of services as Scone, with mines at Ravensworth, Fry Brook and Liddell.

So came into being a diverse region, with intensive farming for dairying and irrigated lucerne on the river flats (aided by the construction of the Glenbawn Dam in 1958), beef cattle grazing on improved pastures, wheat–sheep farming on the Merriwa Plateau and horse studs in the far north. This modern farming system supports a series of towns – Singleton, Muswellbrook, Scone – with modern facilities, augmented in their employment structure by coalmining, which in the 1960s and 1970s made them boom towns with much new housing construction. Across this rural landscape were the great power lines from the twin generating stations at Liddell (decommissioned in 2023). The towns have not grown so much that they have been rebuilt at their centres.

Conclusion

The region was one of the first occupied by the grazing and farming industries and retains many urban and rural buildings from a variety of phases of occupation. At one time the home of the gentry, the gentry tradition survived into the early twentieth century, and may be said to have been taken up again in the rich horse-studs and cattle

properties of the Upper Hunter. At the same time it has been invaded by modern open-cut coalmining and power production that has influenced towns, notably Singleton and Muswellbrook. The river has been the key to much agricultural development and provides the core of the region and its route ways.

4. Manning River

In the south a dune barrier encloses the lakes system, chiefly the Myall Lakes, but including some alluvial land that is used for dairying. To the north is the valley of the Manning River, drainage to which occupies the greater part of the region. Behind a dune barrier are extensive lower river alluvials surrounded by grazing country. The upper river leads to the rugged country where timber getting and cattle are dominant, leading to the Barrington Tops National Park. The Gloucester River drains south from the uplands and was the scene of the first operations of the Australian Agricultural Company.

Local government areas

Mid-Coast

Map 10   **Local government areas and boundaries of the Manning River historic region**

Introduction

This region is bounded on the south by the inlet of Port Stephens that has never had the shipping importance its size would suggest. To the north is the Myall Lakes subregion with a sandy coast mostly, of limited dairying, grazing and timber development but which has discovered 2 important seaside resorts from mere fishing settlements at Forster and Tuncurry in the post-1945 era. To the west the Gloucester River drains a long broad valley running from north to south. The bar-bound Manning River drainage, with alluvia to the east, forms a major part of the region. Rising to steep country and the Barrington Tops National Park, the land is used for cattle grazing and timber getting. To the north lie the Comboyne and Bulga plateaus, reached by steep roads. Both densely populated by dairy farmers in the early nineteenth century, they are now given over to beef cattle grazing where once luxurious rainforest stood on basalt flows. Both were served by the growth of the town of Wingham.

The Australian Agricultural Company

The Australian Agricultural Company was formed in London in 1826 to raise funds to exploit the grazing possibilities of New South Wales becoming apparent from wool shipments and the reports of successful immigrants. A nominal £1 million capital was raised, which entitled the company to one million acres of land in New South Wales. The directors sat in London, but there was a colonial board in Sydney. The company imported labour, tools, and sheep and cattle, especially fine merino sheep whose progeny greatly benefited the colony's stock, and its sales at Maitland were much frequented. Instructions from England led the colonial board to look for land near the coast, and preliminary surveys seemed to have found good grazing on the northern side of Port Stephens, extending to the Manning River. Their large grant was given to them there, and an adjacent strip was set aside for the Clergy and Schools Corporation. The first superintendent, Robert Dawson, began to organise the land.

At the head of Port Stephens he discovered the site of Carrington, where ships might lie close inshore. This was at first meant to be the company headquarters and a town was laid out in 1827. Many buildings were erected, including a slaughterhouse and tan-yard. Bricks were made on the site and slipways for building and repairing boats. A lime kiln was erected. Tahlee House provided a grand home for the manager. In 1829 it was a straggling village of convict barracks and huts, and houses for the officers of the company, including the doctor. About 1830, with a new superintendent, Dumaresq, it was abandoned for Stroud as company headquarters. However, most of the company's land was heavily wooded, and it was already apparent that the extensive open grazing was a chimera. 1850 saw a revival of Carrington with a proposal to settle the company's estate with small farmers, for whom it would be a port, but the gold rushes put an end to those plans. In the 1880s Tahlee House was bought by FHD White from Sydney, accessible to his yacht as a country estate. It became the core building of a religious institution. Only a church also used as a youth hostel, is otherwise left standing and Carrington is chiefly to be seen as an archaeological site of considerable complexity.

Carrington stands near the mouth of the Karuah River which was navigable to small ships, and these reached Booral, a station of the company's activities. A wharf, which still stands, was built in 1834 to send goods inland to Stroud. Wheat and tobacco were grown and cattle grazed, but in the 1850s there were some tenant farmers here. Booral House was constructed as a main residence and survives. The wharf was closed in the 1870s and commodities then went overland to the Hunter. There are now only a handful of timber huts, Booral House, and the stone and timber wharf surviving.

Stroud was located further north in the best land that Dawson found, and was used as headquarters by superintendents Parry, Dumaresq and King. It was well-watered grassland with rich soil and carried the majority of the company's sheep. Stroud House and a church were built in about 1832. Large brick silos for grain were sunk in the ground on an adjacent hilltop. It became a thriving agricultural and industrial village, with many homes of wood; the earthen remains of a sluice to serve the flour mill can be found. Its heyday was in the 1830s and 1840s, when it sent stores to distant sheep stations and received the company's sheep for shearing – the sheep wash can still be

seen in the river not far off. From 1848 it was to be the headquarters for subdividing the estate, and town lots were sold off in the 1850s, when it received a slight boost from some travelling to the New England diggings using the company's trail by way of Nowendoc.

By this time the company had long ago transferred its pastoral activities to the estates it exchanged for these in 1832 on the Liverpool Plains. Only a remnant of the best land remained in the region, mainly on the Gloucester River running north to the Manning. By 1895 only 23,000 acres of the whole 400,000 acres had been sold, but most of the useful land went in the Great Gloucester Estates sale in 1903. By this time the free selectors had taken up more cheaply the best agricultural and dairying land elsewhere in the colony. Stroud meanwhile stagnated in a backwater, bypassed by the railway, surviving as a small village to this day, servicing surrounding farms, though its former grandeur can be seen in Stroud House, the schoolhouse and the wheat silos.

The company had one outlying sheep station at Nowendoc, on its track to New England, on which mules were used. When the company withdrew, it became a private run and a small village centre for the upper Manning. It enjoyed a period of activity with a gold rush from 1872 to 1890, with reef mining. Then it settled back to a service centre with 5 stores, 2 blacksmiths, a school, post office and police station in 1901.

The Manning Valley

The existence of the valley was reported by John Oxley in 1818 on his overland journey southwards from Port Macquarie. The Australian Agricultural Company found its southern banks unsuitable for sheep and kept its operations in the Gloucester valley. The river mouth was explored in 1827 and found impassable at first, but successive attempts to cross the bar were successful and entrants by sea found extensive grassy plains. Settlers began to arrive in 1827, though the area was not officially open for occupation. The 'limits of location' were extended to the Manning soon after. Now they included the Australian Agricultural Company's grant. Then in 1830 the new county of Macquarie opened up the land as far as the Hastings with the scaling down of the penal station at Port Macquarie.

The first settlers were eccentric – John Guilding and Arthur Onslow came to grow tropical crops, including sugar, but conventional pastoralists soon followed. Cattle stations succeeded on the level country and pushed inland to the hills. Cedar getters also arrived, when the Hunter cut out, and provided shipping services useful to the pastoralists. Cedar was still being extracted in the 1870s, but other timbers were by then important. The pastoral inflow continued into the 1840s, with many absentee landowners providing only huts for the men. There were also resident landowners who built substantial homesteads and grew wheat, tobacco, maize and vegetables. On the absentee runs a little wheat might be grown for consumption by the men. By the 1850s the runs on the lower river had some tenants, while those in the hills could offer no fertile land or shipping, and in any case were still licence-holders or leaseholders rather than owners. Cattle rather than sheep were run due to high rainfall, a want of

shepherds, the presence of dingoes and the heavier vegetation. There was a distinct pastoral phase on the Manning from 1827 to the mid-1850s.

Small farmers were however already arriving as tenants, enough to make the subdivision of alluvial land profitable, and free selection brought in more upriver. The loss of convict servants on the large holdings made this more attractive. The Hunter was overcrowded by small farmers and their sons to whom 30-to-40-acre farms on the Manning were most acceptable, even on tenancy, to which they had become used. Some government land also became available from 1847, when the lower river became part of the Settled Districts with its one-year leaseholds, making freehold small farms available. A dense landscape of small wooden huts sprang up, surrounded by patches of maize, wheat and tobacco. Most of the lower river was cultivated in this way by 1860, but selection saw this way of life extend upstream. Towns grew up to serve the farmers, Cundletown in 1855 on the lower river, Taree, founded by Fletts as a private town in 1854 in the centre, and Wingham and Tinonee upstream. All those were accessible to shipping.

Gloucester was founded in 1855 to serve the farms sold or let by the company, it had a company store and in 1860 its first church was built. Nowendoc and Giro villages served the upland country still given over to extensive cattle grazing. All the towns in 1861 had fewer than 150 people, communicating between each other and the outside world by boats on the river. The Manning Valley in the 1860s was clearly divided between a small farm area with few stock on small acreages, and the big cattle runs in the hills to the west.

The 1860s saw the collapse of wheat as a crop due to rust, at the same time as the free selectors invaded the cattle stations and picked out those areas suitable for small farms. Maize became the staple crop on a market soon glutted, though the demand in Sydney and Melbourne for horse feed and brewing was very great. The difficult bar made for high freight charges, and the price of maize was almost too low to bear them: the settlers relied on their own vegetables and maize and were reduced to semi-subsistence.

Now the *Manning River News* published at Tinonee suggested sugarcane. Following the earlier attempts, the first was grown in 1866, and a number of farmers took it up. Sugar mills were established at Tinonee, Woodside, Kimbriki and Wyoming, and there were some small sales to Sydney. By 1871 there were 500 acres of cane, much of it crushed in horse-powered mills and boiled in open pans to make a crude 'concrete' that had only a local sale. Nevertheless it was more profitable than maize, and indicates the spirit of enterprise moving among the farmers, who showed a proclivity to experiment and invest. Other attempts with arrowroot, tobacco and vines also failed, and the community resumed its dependence on maize. This was a stagnant period, from the mid-1870s to the mid-1880s, when little hope lay ahead. Taree had reached a population of merely 339 in 1871, but was emerging as the chief centre with wharf, stores, post office, hotels and a newspaper. Other ports were Harrington, where a breakwater was built later, Croki, Wingham and Tinonee. Wingham was planned by government. There was a large reserve for future development behind the wharf on which rainforest was fortuitously

preserved. It survives as Wingham Brush, a most important remnant of lowland rainforest though only 8 hectares in extent. Wingham did not develop as the chief town of the Manning as the government hoped, and its fate was sealed by the siting of the railway and Pacific Highway through Taree. Partly this was because with increased clearing the river silted up above Taree and larger vessels could not reach Wingham.

By the mid-1880s selectors had taken up all the fringes of good land, and the cattlemen had bought the remaining land in the hills, hoping to discourage selectors. Sawmilling was also spreading inland, shifting location periodically and with them the company villages that supplied them with labour.

Dairying rescued this stagnant agricultural economy. The revolution in dairying technology that had begun at Kiama was slow to reach the Manning, but a co-operative butter factory opened on Mitchells Island in 1893, receiving cream by boat, and at Wingham in 1896. Cream was also sent to Newcastle, but the main central factories emerged at Taree and Wingham, respectively serving the lower and upper areas. Many small villages with creameries grew up – Coopernook, Tuncurry (which also engaged in the timber trade), Nabiac, Harrington, Purfleet and Croki, which also engaged in fishing. The hand separator made these creameries unnecessary, but the settlements, some of long standing, survived as service centres.

The small farms persisted, some as small as 20 acres using paspalum and growing maize for winter fodder. Economies of scale made for some amalgamations, but even in 1941 the Taree factory had 855 suppliers and Wingham 143, the latter figure down from 494 in 1901, indicating a retreat from the uplands; while the farmers on the Gloucester estate first supplied a factory at Gloucester, this was closed in favour of Wingham.

The general decline of dairying in recent years has led to rural depopulation and the conversion of land to beef cattle. Those small centres on the coast, like Tuncurry and Crowdy Head, have been revived as resorts.

The Manning Valley has gone through distinct phases of growth which are now reflected in abandoned dairy farm sites both in the uplands and on the flood plains. Sugar was a slight episode in this story, and the height of rural development was achieved with the dairying industry, now largely defunct, and with it a whole society of small farmers and thriving small towns.

Shipwrecks

The area relied for most of its transport on coastal shipping, and consequently there are many wrecks, the sea being uncertain in its weather and the Manning River offering a difficult entrance. The majority of wrecks found to date are in the vicinity of Port Stephens. Many other vessels have also been lost at the Manning River and Cape Hawke. These may be found by diving, remote sensing surveys or documentary research.

Conclusion

This region has experienced 2 formative influences. The first was the Australian Agricultural Company, with lands running from Port Stephens to the Manning River. The

early disappointments and subsequent policies of the company have had a great effect on the farming development of that area to the south. Meanwhile the private development in the valley proper has seen a sequence of occupancies, from timber getting to pastoralism and farming which have produced a valley community in which the upper and more rugged areas are still less extensively used. Indeed, dairying, once the mainstay of the valley, has retreated downstream and there is much conversion to beef cattle. Growth has produced the unusual pattern of 2 close-by towns, Wingham and Taree.

5. North Coast

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Bounded on the west by high scarps leading up to New England with few passes, this region is not strictly a coastal plain, consisting rather of a series of river valleys separated by ranges, or in the case of the Clarence-Richmond divide, by an extensive stretch of sterile and undeveloped land. Coasts typically alternate headlands and coastal barriers, with bar-bound river mouths dangerous to large vessels. Port development at Coffs Harbour and Byron attempted to remedy this situation.

River valleys, in order from the south are: Hastings, Macleay, Nambucca, Bellinger, Clarence, Richmond, Tweed. All except the Nambucca and Bellinger provide extensive alluvial flats, liable to flooding but intensively developed for agriculture. On the north side of the Richmond River lies the Big Scrub plateau, once intensively cleared of rainforest for grazing.

Rainforest once covered the levee banks of the lower rivers and is present in the steep valleys to the west. On the longer rivers are large areas of forest grazing country early occupied by pastoralists.

Local government areas

Ballina, Bellingen, Byron, Clarence Valley, Coffs Harbour, Kempsey, Kyogle, Lismore, Nambucca Valley, Port Macquarie-Hastings, Richmond Valley, Tweed

Map 11   **Local government areas and boundaries of the North Coast historic region**

Introduction

Sequence of occupation is a device that classifies regional history by identifying dominant regional commodity-based economies, their associated life and landscapes, and sees the history of the region as leading from one pattern of occupation into the next as new opportunities are seized upon. Each participant looks for some ecological niche in the complex landscape, each leaves remnants that influence later occupancies and contributes to the build-up of a regional landscape, which is a palimpsest of the material products of a sequence of occupancies. Nowhere in New South Wales is this clearer than on the rivers of the North Coast.

The region comprises a number of river basins to the north of the Hunter and Manning rivers and Port Stephens (Byron Shire Council 1990). The rivers Hastings, Macleay, Nambucca, Bellinger, Clarence, Richmond and Tweed rise in heavily dissected country forming the eastern margin of the New England Tableland and follow a generally eastern direction to the Pacific Ocean. The most northerly river, the Tweed, flows close to the Queensland border that came into existence in 1859. There is a close resemblance between river valley environments. The coast consists of rocky headland and interspersed barrier systems that provide low dune environments sterile for agricultural occupation. There are no good ports in this coast, though minor calling places, as at Byron Bay and Coffs Harbour, were developed in the past. The river mouths themselves provided the chief access from the sea even though they are bar-bound: ships could penetrate the larger rivers to ports situated up to 40 miles inland.

The lower courses of the rivers flow through extensive flood plains of alluvium, bounded by levee banks that were covered by rainforest or 'brush' vegetation. Much of the alluvium was ill-drained and where this was so, it was clear of trees. The flood plains are set in a landscape of undulating country with naturally poor soils, and which was covered by dense forest near the coast where high rainfalls up to 50 inches per annum are experienced on average. Inland, with lower rainfalls, the undulating country was in 'forest', an open tree-cover with grass. Upriver, small discontinuous patches of alluvium are found in increasingly steep country that leads into blind valleys penetrating the New England scarp. A few passes give precipitous access to the tableland.

Each valley is bounded to the west by the scarp, and to the north and south by hilly interfluves that have been unattractive areas for settlement and are mostly still in dense timber vegetation. Only between the Clarence and the Richmond is the divide low, but here also there is agriculturally poor country that separates developed country around the rivers to north and south.

Basalt flows of tertiary age provide exceptions to the generally poor quality of upland soils. North of the Richmond River is the 'Big Scrub', a dissected low basalt plateau that was extremely attractive to early agriculturalists. Perched high on the tableland margins are other basalt areas, the Comboyne, Bulga and Dorrigo plateaus that were settled from the river valleys.

Though the river basins have a morphological similarity, the smaller valleys offered a less diverse environment. There were no large grassy areas in the Nambucca, Bellinger or Tweed river valleys.

The valleys were similar too in their dependence upon metropolitan Sydney, and in their need for commercial staples – there was no subsistence economy here. Brisbane, though closer for the northern settlers, offered a smaller market that was cut off by Queensland's tariffs on timber and produce. The valleys have a climatic similarity, though frosts are more common in the south. This was an area in which settlers faced similar problems, and a solution found in one valley would be taken up and tried in the others. The influence of government – generally on the side of the small settler – was uniformly pervasive, and a similar sequence of occupancies can be distinguished.

Briefly, the common sequence is:

- Aboriginal occupancy
- exploration
- penal settlement
- cedar cutters and shipbuilders
- pastoral occupancy
- small farmer occupancy
  - experimental phase
  - maize-growing
  - sugar growing
  - dairying
- localised mining

Each of these modes of occupancy selected different land types within the valleys as its most suitable environment. Together the surviving occupancies make up a suite of present-day land uses, along with some minor industries like banana and fruit and vegetable production.

Aboriginal people

Aboriginal people used every part of the diverse landscape. Early reports, such as those of John Oxley the explorer, make it plain that there was a high density of Aboriginal people of the northern rivers, especially close to the coast where a rich marine environment could be exploited. The brushes too were rich in small animals and fruits. On the inland grassy plains Aboriginal people lived a hunting and collecting life more closely similar to that of the Aboriginal people in New England and to the west. It seems that trade linked the coastal and inland tribes, while contact was maintained with the population of New England. The Aboriginal landscape was rich in the mythology that attached to all natural features. Little of this survived the impact of settlement.

Aboriginal people were soon living close to pastoral stations where they formed a casual labour force, drawing rations to buttress dwindling returns from traditional pursuits. Disease and armed conflict hastened the decline in the number of local

Aboriginal people, but there was still a substantial population in the late nineteenth century when government made positive moves to improve the conditions that Aboriginal people were living under. Tools, seed and rations were provided to help Aboriginal people to take up farming and fishing. At the end of the century there were small groups growing maize on islands in the rivers, fragile communities under the threat of disruption by strong drink supplied to them illegally.

Exploration

The Aboriginal people of the area first saw European men in the guise of small exploring parties and runaway convicts. Cook sailed by remotely, noting only the grosser forms of coastline, Shoal Bay, Trial Bay and the characteristic shape of Mount Warning.

John Oxley first came upon the northern rivers by land in 1818. He set out at the Macquarie River in the east and travelled to the coast at the mouth of the Hastings. He reported what he thought would be a good harbour and fertile soil. Two years later he made a second trip to reconnoitre the port and look for the Macleay River. The Tweed was found by a party going south from Brisbane, while convicts discovered the intervening rivers as they fled from Moreton Bay, only to be intercepted at Port Macquarie. No immediate rush followed reports of fertile land and timber resources, but Oxley's discovery prompted government to make the first settlement.

The penal station

Oxley's report on Port Macquarie came at a convenient time, for it was hoped to open the Hunter River valley to free settlement. No settlers had been allowed there because of the presence of the penal settlement at Newcastle, which for safety was kept surrounded by a barren wilderness. In the County of Cumberland, pressure on land built up in the third decade of settlement. Its resources and sea communications made the Hunter a suitable area of expansion. In 1823, convicts were shipped north from Newcastle to Port Macquarie.

Convicts cut cedar from the brushes on the Hastings and Maria rivers and grew maize for their own consumption. More important, the 'tropical' climate of the area led to an attempt to grow sugar, at first on the Hastings and later on Wilsons River. A former West-Indian planter, Thomas Scott, was sent to supervise the plantation on which convicts took the place of slaves in other sugar-growing areas. Frost and floods ruined the experiment, but enough survived to encourage a second and successful attempt in the 1860s.

Sugar growing emphasises the contemporary view of the tropical character of the north coast climate. Before 1830, John Guilding had been given land on the north bank of the Manning River to grow tropical crops, and there was a persistent testing of this climatic stereotype through the century.

The cedar getters

The private cedar cutters who had first invaded the Hunter and its tributaries followed the convicts. They then turned their attention to the brushes of the Illawarra, south of

Sydney. The red cedar, *Toona australis*, is deciduous and provides a soft easily worked timber rare in New South Wales, and attractive because when finished it resembled the fashionable mahogany. Some cedar was exported, much more was used in the colony for building, fittings and furniture.

Cedar cutters turned their attention northward at the end of the 1820s; in 1837 they reached the Macleay, in 1838 the Clarence and in 1842 they were cutting on the Richmond. The brushes of the lower river banks held their attention and localised this activity. The rivers provided transport for the bulky product. Cedar cutters worked in the brushes, rolling logs to the water's edge or sometimes using bullocks. Logs floated downstream and were intercepted at ports from which the timber was shipped to Sydney. These ports were the first settlements on the rivers. Tumbulgum and Teranora on the Tweed, Ballina on the Richmond, Grafton on the Clarence and Hungry Heads on the Bellinger were cedar ports. The Nambucca bar proved impassable and slowed development.

Shipbuilding accompanied the cedar getters in their northward spread. Cedar required transport to Sydney and shipbuilders were attracted by plentiful riverside timbers. As in New Zealand, shipbuilding was an early element in the settlement. The heyday of northern rivers shipbuilding came in the 1850s; riverside settlement reduced the attractions in the 1860s and only the Manning remained in the late century as an important shipbuilding centre to rival Brisbane Water on Broken Bay and Sydney, the 2 chief locations of the industry.

The pastoral occupation

With removal of the Port Macquarie penal station in 1833 (the prison continued in use until 1846), land around the Port was opened to free settlers. Good open grazing land was limited by terrain, and since this was within the 'limits of location', holdings were kept fairly small by the need to buy land rather than occupy it under licence for a small fee. In 1836, settlers were allowed to take up land on the south bank of the Macleay River. Beyond lay the Port Macquarie Pastoral District.

The chief northern frontier of pastoral expansion lay at this time in New England. As settlement moved north the long line of road leading back to markets and supplies became more and more inconvenient, so that just as some men were thinking of moving further out by settling the Darling Downs, others tried to shorten their lines of communication by taking up river valley land with access by sea to Sydney. In 1839 settlers moved down to the open forest country in the Clarence River valley, and in 1840 similar land was first taken up on the Richmond. By 1845, most of the available grassy country was taken up on the larger rivers. This occupation was very limited on the Nambucca, Bellinger and the Tweed where it arrived in the 1860s.

This occupation emphasised the inland parts of the river valleys and gave rise to new valley centres, except for Grafton, which as an established cedar cutters' port was also well placed to serve the surrounding pastoralists. Casino and Kempsey belong to this occupation. The pastoral population was small and scattered and with a predominance of men.

The pastoral economy was at first based on sheep as in New England. In 1844 there were 16,000 cattle and 119,000 sheep. But this was not good sheep country, the rainfall was high and the flocks suffered from footrot and catarrh. By 1850 cattle were clearly dominant. Sydney could be reached by shipping live fat cattle, but more were marketed as tallow, hides, horns and bones after boiling down in large vats close to shipping points. Cattle could also be sold for stocking new inland runs, and this was one source of stock for the Queensland cattle kingdoms, which built northwards from the 1860s. Meat preserving began in the 1860s at Ramornie on the Clarence. However, a large-scale marketing system needed refrigeration and this was not perfected until the 1890s.

The small farmer occupation

Land was opened to agriculturalists in the 1850s, lying on the levee banks of the lower rivers in densely forested country spurned by pastoralists who could not afford to clear the land they used so extensively. There was only limited settlement until the *Land Alienation Act 1861* opened crown lands to 'free selection' at a low fixed price that could be held over by paying a small interest each year. Before 1861, men took up small farms of 40 to 60 acres, but under free selection holdings of up to 320 acres were possible, and 640 acres after 1875. Such farms were too large for a single family to clear and use, so clearing leases and tenancy resulted.

The farmers, with their dense population and many and frequent needs to buy goods, created a new town system on the lower parts of the rivers. The old cedar ports were revived and new settlements founded, at Ulmarra on the Clarence, Smithtown and Gladstone on the Macleay. Shipping services grew more frequent to serve farmers growing perishable produce.

The experimental phase

The first farmers tried growing wheat, which failed in the wet summer conditions. There was a search for a new valley staple to supplement maize that clearly would grow well. But maize was very soon in overproduction, though it was shipped to feed the large animal populations of Sydney and Melbourne. Prices were permanently low except when the competing New Zealand oat crop failed.

The search for new staples demonstrated the 'tropical' view of the climate. Arrowroot was successfully grown and survived as a crop, but the demand was small. Mangoes were tried, but exports to India did not take place as hoped.

Breadfruit was tried, but the expected market in the South Sea islands was cut off by a British embargo. Opium poppies were not successful, nor coffee nor tea. Tobacco was grown, but of such a low quality that it was used as a treatment for scab in sheep. Sericulture was attempted, with the idea of shipping seed (eggs) and grain (cocoons) to labour-rich Italy and France, but the scheme came to nothing. Cotton enjoyed a small boom during the American Civil War when normal supplies were cut off, but suffered a decline when peace came. Rice was grown on the Macleay but soon given up. This was an example of a region actively searching for profitable crops and with limited success.

Sugarcane growing

The only tropical crop to prove successful was the sugarcane. Thomas Scott was still alive to communicate his skills, and he had continued to grow a stock of canes. Revival came on the Hastings and Manning rivers in 1864 at the height of the experimental phase, and the crop rapidly increased its acreage in the 1860s. There was however a northward shift to find a less rigorous climate, and the industry came to a rest on the Clarence, Richmond and Tweed, abandoning the 2 southernmost rivers before 1870, and the Macleay in the mid-1870s. Cane growing also shifted downriver, away from the frost-prone upper reaches in which it was first tried. On the Richmond there were attempts to escape frosts by ascending the slopes of the Big Scrub, but high transport costs away from the river artery made this an uneconomical site.

Sugar-growing by European labour on small farms was then an anomaly among sugar regions of the world, but it fitted well into the intensive farming pattern of the northern rivers. Sugar succeeded early on because it could be sold to a local market in an unrefined state, but was soon aided by the Colonial Sugar Refining Company (CSR), which built mills on the Macleay and Clarence in 1870, and northward on the Richmond and Tweed by 1880. Small riverbank mills remained in the industry to allow spread away from the big central mills of the CSR.

The dairying industry

In some years sugar was the most important crop measured by acreage on the Tweed but was always second to maize on the Richmond and Clarence. To the south, Macleay, Hastings and Manning farmers had little choice but to grow maize and sell it as grain or feed it to pigs. Then in the 1890s the sugarcane was heavily infested with gumming disease, which seemed to spell disaster. Also, the government threatened to remove the tariffs that protected the industry against Queensland competition.

Dairying was taken up as an alternative. For long it had been supposed that dairying as a temperate zone activity could not survive on the 'tropical' north coast. But in the 1880s, farmers from the main dairying district of the Illawarra actively disproved this belief. Indeed, optimism replaced pessimism, and it was supposed that northern dairying would be free of the winter season which reduced southern output. This was not the case, and dairying expanded with the same seasonal problems faced elsewhere. Not until the mid-1890s was *Paspalum dilitatum* found to be a useful grass for the northern coastlands, so there were early problems with getting suitable fodder grasses.

With the dairying industry the small farmer was much more mobile than he had been hitherto. Now, with a compact product easily transported, he could move away from the rivers, while his crop of grass was climatically more tolerant than sugarcane. Dairying dispersed over the flood plains, into the Big Scrub and upriver to compete with extensive beef cattle raising on the inland country. After 1901 the industry spread to the high basaltic plateaus lying above the river valleys. Basalt and dairying had a strong connection – the Illawarra men sought out first the basaltic soils of the Big Scrub that most resembled their best southern soils around Kiama. They chose the Richmond rather than other rivers, which accounts for the dominance of that valley in north coast

dairying until after 1901. It then began to spread more strongly in the Clarence and other valleys to the south.

By 1901 the chief occupation types of the northern coastal rivers were established, though dairying was yet to spread to occupy the large areas it filled by 1920. On the lower rivers were small farmers cultivating much ground in maize and sugar. Around them were the dairymen supporting a dense population and numerous villages and towns, many with their own butter factory. The dairy farms spread into favourable environments in the upper valleys, supporting towns like Kyogle, and were often pushed deep into the scarp by large freehold pastoral stations that had pre-empted the grassy portions of the valleys. Timber cutting was also relegated to the steep hill slopes, where some uncut-over land was left, including sheltered rainforests with red cedar growing in them.

Since 1901 there have been changes, accelerating in the 1960s as coastal tourism has provided a new phase of occupancy. This, along with beach mining, fills an empty niche in the earlier ecology. Dairying has retreated and many beef cattle are now to be seen in areas such as the Big Scrub which formerly were all dairying country. A retirement element emerged strongly in the population and the north coast has also become a haven for younger people seeking a lifestyle different from that available in the city.

The Macleay River Valley

The valley supported the Dangaddi until settlement. Some survived the impact of contact with settlers, and Aboriginal reserves were made in 1883 at Kinchela, in 1885 at Bellbrook and at Burnt Bridge in 1893 as refuges.

The Macleay was discovered first from the sea, by Commander White who found the wreck of the brig *Trial* and so named Trial Bay, and by John Oxley who entered the river in 1820. More important was a report published in the *Sydney Gazette* in 1826. It so impressed the Commander at Port Macquarie that he sent an expedition to examine the area (Neil 1972). ln 1834 lime kilns were built to supply Port Macquarie at Pipers Creek near Kempsey. Clearly the river was known quite early overland.

In 1836 the Commissioner of Crown Lands found 9 squatters established on the Macleay – the 'limits of location' embraced the lower river banks – with a population of 56 freemen, 8 women, 23 children and 111 convicts. Enoch Rudder was growing wheat and vines and running sheep and cattle, and in the same year tried to sell land in a town he called 'Kempsey', which later became East Kempsey. There were 3 shipbuilders – with the cutting out of the Manning cedar, timbermen had arrived on the Macleay about 1835. Many ships were built, but the industry passed north with the cedar getters in the 1840s.

The commissioner's headquarters were fixed on the site of Kempsey, on the river bank opposite Rudder's town, but after a short while they were moved to Yarranal (Belgrave) at the head of navigation. By 1845 there were 45 runs and a boiling down at Warneton where the Macleay River steamworks was located. The population had grown to 340 men and 126 women. Sheep had almost disappeared – this was cattle country.

Produce shipped out included timber, tallow and hides but also wheat and maize. Small farms were established from 1842. Rudder's Town acquired some buildings and a post office, but in 1855 a government town was gazetted north of the river and became West Kempsey. It adjoined private land that became Central Kempsey. In 1856, though Rudder in 1836 had advertised his town as 'on the high road to New England', the first practicable road to the tableland was found, though the present-day easier route was found only at the end of the century. The first steamships arrived in 1858; they could reach Kempsey, but as they became larger they increasingly unloaded passengers and cargo at Trial Bay. The difficulty of the coast made government concerned to provide harbours of refuge apart from the dangerous river mouths.

Trial Bay was chosen as one such site, and the prison was built there from 1877 to 1886 to house convicts who would construct a large breakwater. Work stopped in 1903 before completion. It was later the site for confining German internees. Reminders of the effort are the gaol, remains of the breakwater, quarry and Arakoon House. The tourist town of South West Rocks borders the site.

Free selection brought an invasion of small farmers from the south, and the population grew from 1,963 in 1861 to 4,973 in 1871. Kempsey grew to a population of 375, with post office, stores, churches, 2 schools, 2 hotels and a newspaper. Maize was the staple crop when wheat failed, but paid little, and sugar was tried from 1866. This was downriver settlement, and villages grew at Frederickton and Darkwater, gazetted as Gladstone in 1864. Aldavalle was notable for some German settlers, and Stuarts Point inside the heads took the larger ships. Warneton was surveyed as a private town above Kempsey, continuing its industrial tradition with tallow and a soapworks. Bellbrook and Urulgurra, both now gone because of the change of line of road, served the upriver pastoralists also.

Sugar in private mills made only 'concrete' for local sale, but in 1868 the CSR built the Darkwater Mill and some larger mills were also built at Kempsey and Frederickton. The Macleay is frost-prone, sugar failed, the CSR crushed at a loss in 1870 to 1873 and finally removed its mill to Harwood on the Clarence. There was a return to maize, but this supported a growing farm population and a rising Kempsey, with its hospital in 1881 and its incorporation in 1888.

Dairying arrived later here than further north, and the central factory system was adopted from the beginning. Central factories were at Smithtown, Kempsey, Warneton, Frederickton and at Toorooka on the upper Macleay when dairying spread there in 1906. In 1802 there were 29 scattered separating stations, to be replaced after 1900 as farms acquired hand separators and drove to the central factories 3 times weekly.

In the new century, with a bridge over the Macleay at Kempsey built in 1900, dairying and maize continued to provide low incomes. Sawmilling prospered on the upper river. Kempsey increased its hold on the valley with the coming of the motor vehicle, and the small towns and villages stagnated, shrank, or disappeared, leaving some excellent examples for preservation, as at Gladstone. With the collapse of north coast dairying most of the alluvial land, as well as the upper Macleay, is given over to beef cattle. Kempsey meanwhile was a small town with high unemployment (at the time this

document was originally published). Prospects for development seemed better on the coast, where some sandmining has taken place.

The Clarence River Valley

'The Big River' was discovered in 1834–35 by an escaping convict, Richard Craig, but was not explored further for some years. In 1839 Thomas Small, a Sydney merchant, and Henry Gillett organised an expedition that named 'Susan Island'. They settled at Woodford Island to run cattle. A now-vanished village, Birchgrove, grew up here. Also in 1839, Captain SA Perry, deputy Surveyor General, entered the river in the *William IV* steamer, though it seems previously to have been navigated by a Captain Butcher. The name 'Clarence' was bestowed on this biggest of all rivers so far discovered in the north.

Settlement began immediately. Small took up an upriver run, and with drought in districts to the south there was much interest in new land, all forest country above Grafton suitable for grazing. Copmanhurst station was taken up in 1839, Dobie took up Ramornie in 1840, Ogilvie took up Yulgilbar, where the famous castle homestead was built, in 1840, and Clark Irving, a major entrepreneur on the northern rivers, took up Tomki. The Clarence pastoral district was separated from the Macleay in 1842. Cedar getters had already been at work further downriver and on the site of Grafton shipbuilding was going on. This site became known as 'The Settlement' from the earliest times. By 1842, most of the cedar getters had moved north to the Richmond, though until the present, timber getting has continued in the fringes of the valley: in the late nineteenth century Grafton was a sawmilling centre and exported timber by sea.

Conflict with the Aboriginal people followed settlement. European men were killed and stock speared and driven off, and some massacres of Aboriginal people ensued, one at Ramornie. One squatter, Coutts, was tried and acquitted of poisoning Aboriginal people with arsenic in flour. A reduction in numbers, and the police, brought peace, and by 1891 it was possible to report that Aboriginal people were employed as stockmen, in cane stripping and fishing, and that 9 reserves had been made for them up to 180 acres in size.

Settlement was followed by economic depression in which the pastoralists sought to turn their cattle into money. Hides, bones and horns could be exported, but boiling downs for tallow were established, salting of sides of beef for export became common. Clark Irving started a meat preserving works at the Broadwater and a canned meat factory worked at Ramornie. These were immediate developments of the primitive cattle stations whose centre was Grafton.

A second store opened at Grafton in 1840, and a courthouse was built there in 1846, to be renewed in 1861. Barnet designed the present courthouse built in the 1880s. Grafton grew as a town, becoming a municipality in 1859 and acquiring such features as a newspaper, *The Clarence and Richmond Examiner*. Much new building took place in the boom years, including the post office in 1878, Hunt's cathedral begun in 1884, and the gaol in 1891 to 1893. Work on the entrance to the river to improve its navigation began in the 1860s, and the telegraph was connected to the main Australian system at Tenterfield in 1882. Grafton bid fair to become the urban centre of the north coast.

Always nagging however was the idea of a railway to New England and the west. The Railway Commissioners had no intention of seeing their New England traffic draining away to Grafton's shipping, and no line was ever built, either to Tenterfield or Glen Innes, though the routes were surveyed. The shipowners of Grafton dreamed in vain of an inland empire. The best they could achieve was a northern rivers' line, which linked them to Lismore and Murwillumbah. The bridge at Grafton was not completed until 1932. So, there was not enough through-traffic on this line to Sydney. The town of Grafton remained merely one of the larger country towns. The decision in 1874 to plant the town with decorative exotic trees has borne fruit especially in the 'Jacaranda festival' in November.

Meanwhile, farmers had invaded the Clarence. Land was sold for small farms from 1854 and the 1861 Selection Acts brought in many more. The big upstream runs, however, mostly protected themselves, opening up to dairying in the 1890s when land prices were high. The interest of the early agriculturalists lay in the wide alluvial plain of the lower river that was soon densely populated by many small farmsteads connected by a complex road system. At first it was hoped the Clarence would be the 'wheat bowl of NSW', but rains in the 1860s brought rust, and maize became the mainstay. Soon the market was glutted. Sugar saved the day, and many small mills were built, the largest at Ulmarra but the industry became fully established only when the Colonial Sugar Refining Company (CSR) built Southgate, Chatsworth and Harwood. A new mill was built in South Grafton. As it was not built by CSR it finally broke the monopoly nexus between New South Wales and Queensland sugar production (Neil 1972). Company towns grew round the mills, and real farming centres arose at Ulmarra (ripe for conservation), Lawrence and Maclean. Maclean, on the highway and near the mouth of the river, enjoying some tourist development, has flourished but has few buildings of heritage interest. Fishing has long been the mainstay of Yamba, now also a tourist centre.

The shift of sugar after an experimental period towards the lower river allowed dairying to come in. There were at first many small butter factories, but these became creameries and the central factories emerged at Ulmarra and Grafton, which reinforced their urban status. Dairying also spread to the upper river, where Copmanhurst, a village serving the pastoralists, was enhanced.

In the last 30 years, sugar has maintained its place, helped by the share of Australian production given to New South Wales at Federation, but dairying has greatly declined due to loss of export markets. The pastures even on the flood plain have been given over to beef cattle, there has been much amalgamation of farms and tree crops of poplars have become payable even on the richest land. Timber getting has large resources available in the hilly country to the west and a large pulp mill is proposed.

The Richmond River Valley

Here the Aboriginal people followed 2 economies. One was based on small animals and fruits in the downstream rainforests. The other was supported by the seeds, roots and larger animals of the interior grasslands. The tribes appear to have been small, but trade was extensive. Conflict and massacres followed settlement. Then, in 1891, Aboriginal

people were reported stripping cane, clearing scrub and working on cattle stations. The Cabbage Tree Island community had been established and given agricultural tools and fishing boats; another such settlement had been established on the Nambucca, at Brushy Island.

Cook had seen and named Cape Byron in 1770, but the river was not explored until Captain Henry Rous sailed there in the *Rainbow* in 1828 and named Lennox Head. No immediate settlement followed.

By the early 1840s the cedar getters had worked their way north and now began cutting on the Richmond River. Cedar camps were widespread on the complex stream system and were mapped by L Daly in *Men and a River*. Pelican Creek and Gundirimba were early centres for stores and inns, and boats would come upstream to load, or the logs would be floated down to Bullurna (Ballina) for loading. There was some involvement of Aboriginal people in this work, though the cutters introduced diseases. On the lower river and in the Big Scrub, cutting continued into the 1870s, with shipbuilding at Woodburn and sawmills at Blackwall and Wyrallah. From the 1880s the milling industry moved inland to the hoop pine of the scarp-land forests. Much of the valuable timber of the Big Scrub was merely burned in the process of later clearing.

Pastoralists began occupying the inner Richmond forests soon after those on the Clarence. Fairy Mount was taken up in 1842. Ogilvie, already on the Clarence, took up Wingerie in 1842, and Wilson occupied the Lismore station on the north arm in 1843. Grass here was limited, and pastoralists concentrated on the country above Casino, a station of Clark Irving. Insolvent squatters from New England came down to start again on the Richmond. By 1854 all the good grazing land had been taken up. Sheep, suffering in the wet from footrot and catarrh had been replaced by cattle, and there were a number of boiling downs, at Fairy Mount, Casino and Woram. The long leases of 1847 gave security of tenure for improvements and after 1881 much of the pastoral land was put into freehold to protect it from selectors.

Urban development was at first limited – the stations ordered their supplies by sea from Sydney in bulk, so it was only in 1856 that land was sold at Casino. It soon had a store, post office, police station and courthouse. A school was established, races had been held since 1854, and a doctor and chemist established themselves there. At this time the main population was on the upper river and Casino its natural centre. Lismore, where lots were also sold in 1856, served the cedar getters with a store, inns and a sawmill. Ballina had for long been the port for larger vessels: it was opened as a town in 1857, when there were already many services. The Richmond trade benefited, as did the Clarence, from the discovery of gold on the Timbarra, and at Tooloom, where there were 2,500 diggers at its busiest. Grafton benefited most from the goldfields traffic.

The lower river has much less well-drained alluvium than the Clarence, and more extensive ill-drained flood basins useful only for rough grazing, though the process of drainage has made much new agricultural land, particularly in the twentieth century. Nevertheless, farmers were attracted from the south from the 1860s, taking up the drier levee banks where boat transport was available. There were many settlers of Scots origins, and most had farming experience further south. The Grafton Steam Navigation

Company became the Clarence and Richmond Steam Navigation Company, and then further expanded its operations to become the North Coast Steam Navigation Company as settlement on all the rivers grew and trade expanded.

With more people, the urban focus shifted downstream. Casino remained a squatters' town, with an Anglican church in 1865 and a Catholic church in 1872. Lismore also built churches to serve the new settlers in the 1860s, and a new school in 1862. It displaced Casino as the chief town, with a thriving town life represented by a Musical Union, a Mutual Improvement Society, a School of Arts, and a branch of the Sons of Temperance. Lismore became a municipality in 1879. Ballina grew with more trade and immigration by sea. Coraki grew as a village, with a Presbyterian church in 1865, and was boosted by William Yabsley's shipyard from 1864. Wardell was another early agricultural centre, founded on a site where sand dunes provide a fresh water supply from wells.

The Richmond population grew from 1,283 in 1861 to over 4,000 in 1871, and most of the river-bank land was then taken up. The remaining rainforest was cleared and maize planted. Again, sugar was seen as the more profitable crop. Cuttings were brought from the Clarence in 1864 and the first mill opened at Docrington in 1869, with Gundurimba and some others by 1871. Up to 75 mills operated in the 1870s, when sugar growing spread up to Casino, only to be driven back by frosts. The CSR mill opened the Broadwater Mill with its Company town in 1881 assuring the future of the industry on the lower river. Sugar also became popular through the Big Scrub basalt plateau, where mills worked reasonably successfully at Rous and Alstonville although without the advantages of river transport.

What transformed the Richmond most was the influx of dairy farmers from the South Coast, seeking basalt kraznozem soils to which they had become accustomed around Kiama. What started as a trickle became a flood in the 1880s and 1890s, many shipping their well-bred dairy cattle into Ballina, a process that continued until about 1910. The Big Scrub plateau was denuded of rainforest and sown with the new *Paspalum dilitatum* imported from South America. With the technological revolution in dairying the industry became most profitable and refrigeration in factory and shipping solved the problem of high summer temperatures. At first there were many small factories, but the central factory system centralised manufacturing at Lismore and Byron Bay. Lismore and Alstonville became the urban centres for Big Scrub farmers, and Lismore acquired a gasworks and sewerage scheme in the 1890s. As the Big Scrub was exhausted, farmers moved into the alluvia and inland. The sale and subdivision of the Kyogle station and the foundation of Kyogle and its butter factory in the early twentieth century presaged a movement into pastoral country. Dairying became the dominant industry throughout the Richmond until the great retreat of the 1960s and 1970s that saw the demise and amalgamation of many small farms into beef grazing properties.

Developments in recent years have seen the centre of development shift to the coast for tourism and sandmining, while a significant element of retirees and 'alternative society' has appeared, as at Nimbin. A strong appeal to save remaining rainforest patches has come along with these. Tropical fruits have replaced dairying to some extent, notably macadamias, avocados and bananas.

The Tweed River Valley

The Tweed River comprises the north, south and middle arms within a valley much smaller than the Clarence or the Richmond. The amount of alluvium is therefore limited, and steep slopes have been cultivated leading to a soil erosion problem much less apparent to the south. There are cultivable areas of tertiary lavas. The Tweed is connected with Brisbane by rail. The Queensland style of house on piles and the club industry at Tweed Heads that serves Queenslanders with gambling facilities not available in their own state, show the marked associations with Queensland. Murwillumbah is the chief service town for rural areas, while Tweed Heads is an old port and now a tourist resort.

The Aboriginal tribes were the Uukimbil and the Wollembin. After conflict, peace ensued, and reserves were made on the lower river in the late nineteenth century, when the population became admixed with Kanakas imported to work the sugar plantations.

The river was discovered from Brisbane by John Oxley in 1823, and Henry Rous in *Rainbow* explored the first 30 miles of river course, finding it navigable for small vessels. For a while, a guard was mounted at Point Danger to intercept runaways from Moreton Bay fleeing south, but was withdrawn due to Aboriginal hostility.

The first cedar parties arrived in 1843–44 and cutting on a small scale continued through the 1850s. But early in the 1860s there was a cedar boom as the southern rivers were cut out. Prices for cedar were high. Terranora emerged as the centre for the cedar getters, with stores, inns and shipping facilities, while Tumbulgum had its origins in this phase. Shipbuilding, as elsewhere, accompanied cedar getting.

Forest land is limited on the Tweed, so by 1860 there were 2 runs on the upper river, but there were poor prospects as much clearing was needed. The entry of small farmers – some of the cedar getters settled down – was more important from the 1860s, with a boom in the 1870s. Land was quickly taken up in small farms, including the rich basalts around Cudgen. The selections allowed, at first 320 acres, then 640 acres after 1875, were too large for workable farms and the social problem of share-farming and landlordism was introduced. In 1941, at the peak of the small dairy farmer industry, there were 1,437 share farmers. This was a lesser problem on all the northern rivers.

Farmers as elsewhere experimented with 'tropical' crops – opium poppies, arrowroot, mulberry trees for silkworms, tobacco, but fell back on maize and sugar. In 1869, sugar was grown at Cudgen using Kanaka labour. Through the next decade, several mills were operating, as at Cudgen and Abbotsford. The CSR once more brought efficiency to milling operations with its Condong Mill in 1880, heralding a sugar boom.

Towns flourished. Tumbulgum had a store, 3 hotels, a post office, a school, shipbuilding and a Tweed River Progress Association Hall in 1880. Kynamboon developed as a rural centre for the upriver section, but it was eventually replaced. The settlers preferred Murwillumbah. In 1879, Murwillumbah was gazetted as a town and quickly grew to serve the settlers and the schooner trade. The town was connected to Lismore by rail in 1894, and later to Grafton. The railway ran through the port of Byron Bay.

Byron Bay merely had an inn for travellers, and Tintenbar served the Brunswick River settlers, but it was built as a port in 1880. The river mouths on the north coast are all bar-bound, and are no refuge in a storm, leading to many wrecks. Government systematically tried to remedy this with its abortive breakwater at Trial Bay, and the more successful constructions at Coffs Harbour (1892) and Byron Bay. Coffs Harbour was given a boost by the late discovery of Beacon Hill gold in the 1890s. Both ports have now been dismantled.

Cane had thrived on the Tweed, and dairying followed, with the participation of the south coast. It was helped by the gumming disease crisis in cane in the 1890s, and by the uncertainty of retaining the NSW sugar market at the coming of Federation. Edward Seccombe introduced *Paspalum dilitatum* to the north coast on the Tweed in 1892. Factories sprang up at Murwillumbah, Byron Bay (with the aid of the railway), Uki, Tweed Heads, Tyalgum and Brunswick Heads, eventually to be centralised on Murwillumbah and Byron Bay.

Bananas followed, with commercial production from 1910. This industry was given impetus by returned soldiers' farms after the First World War, occupying the steep slopes hitherto ignored. Indians and Chinese also entered the industry. In the 1920s the industry was devastated by the disease 'bunchy top' but recovered from the 1930s to remain an important industry. Vegetables – peas, beans, potatoes – also developed as a twentieth-century industry replacing maize, now grown chiefly as a fodder crop.

The dense population that all these industries supported was served by Murwillumbah, but also by many outlying villages that have virtually disappeared with road transport. Condong retains its mill employment, but Tumbulgum is a shadow of its former self, as are Uki and Tyalgum based on closed-down butter factories. Tweed Heads had turned to tourism and is booming. Bangalow, which in 1914 had 2 stores, bootmaker, solicitor, doctor, dentist, 2 blacksmiths, oyster saloon, tailor, mercer, fruiterer, 3 carriers, a tinsmith and a newspaper is now largely a residential area. Mullumbimby, declared a municipality in 1908, now struggles. The devastation associated with the decline of dairying has hit the Tweed less than the Richmond, but the inexorable process of centralisation has reduced the rich variety of its landscape. Even Murwillumbah displays little of its early past, the great fire of 1907 having destroyed its main street.

Shipwrecks

The northern rivers are bar-bound, which makes them impossible to enter during a storm. Government only partly remedied this by providing havens at Coffs Harbour and Byron Bay. Consequently, there were many shipwrecks, those known being mainly near the river mouths. Ships were wrecked as they tried to enter, or as they lay offshore in storms awaiting an opportunity to enter. The main concentrations of wrecks are at Tweed Heads, Byron Bay, Ballina, Nambucca Heads, the Clarence, Macleay and Hastings rivers and Crescent Head. The coast is strewn with the wreckage of ships carrying supplies for the north coast.

Conclusion

The North Coast region consists of a series of valleys that offer a variety of ecological niches, from rugged timbered uplands to open grazing country and the rich flood plain alluvia. Successive waves of incomers have taken over these niches and provided a rich and varied land-use pattern, now changing as dairying withdraws and beef cattle replace the Friesians and Jerseys of old. By the end of the nineteenth century the cedar getters had cut out the lower rivers, sawmillers were working the inland forests, pastoralists grazed cattle upstream, sugar and maize farmers occupied the alluvials and dairy farmers cleared the high rainfall wet sclerophyll forests and rainforests. Only in the twentieth century have the sandy coastlands been taken up by beach tourism and sandmining. This is an example of a complex environment in which a rich diversity of land uses have evolved over time.

6. New England

The New England region is largely made up of a plateau bounded on the east by very rugged country. On the west, steep country falls onto the valleys of the Manilla and Namoi rivers, but the divide is less marked to the north, where the division between alluvial plain and solid geology makes the boundary. There are great gorges incising the plateau on its eastern edge with spectacular falls such as the Wollomombi.

The plateau itself is generally a rolling thinly forested surface with extensive flat areas such as Beardy Plains. The area presented an attractive grazing resource to early settlers.

Rainforest and wet sclerophyll forests occur on the surrounding steep country and provide a basis for timber industries. The plateau itself is naturally open forest with grassland. Original natural grasslands have been much extended by clearing.

The hilly shires of Bingara, Barraba and Manilla are included in the region as the boundary of New England. Their solid geology and mining history distinguish them from the Darling Plain.

Local government areas

Armidale Regional, Glen Innes Severn, Gwydir (part of), Inverell, Tamworth Regional (part of), Tenterfield, Uralla, Walcha

Map 12   **Local government areas and boundaries of the New England historic region**

Introduction

New England was only thinly populated by Aboriginal people, as the first settlers reported: the Anaiwan occupied the area about Armidale, and Waleha in the south; the Narbae frequented Beardy Plains about Glen Innes and Inverell; the Kianbal lived around Ashford; and the Bombai at Ben Lomond and Mount Mitchell. As elsewhere, they put up guerrilla resistance, killing at least 15 Europeans, but some proved amenable to employment on stations. The first Crown Lands Commissioner, Macdonald, took a benevolent view of them, distributing blankets from 1839.

By 1845 he could report that there had been no European deaths from attack for 3 years; though this might also have been because of massacres like the one at Deepwater station. Macdonald expected them to become extinct, particularly with the failure of a mission on Mooki station where some Aboriginal graves are still to be seen. The equipping of clubs with hobnails as shown in the Armidale Museum shows some adoption at least of European goods.

Exploration

The New England plateau runs north from a tangle of mountains and stands about the heads of the Hunter and Gloucester rivers. British discovery was mainly the achievement of pastoralists seeking open land. Certainly, Allan Cunningham passed on its rugged western fall in 1827, and John Oxley crossed its narrow southern end in 1818, camping at the site of Walcha, before descending into the Hastings Valley from Mount Seaview. But Cunningham never saw the grasslands, and Oxley's famous discovery was the 'tropical' country on the coast.

Settlement

When the Australian Agricultural Company took up its vast estates on Liverpool Plains in 1832 it displaced some squatters and barred the way to others seeking well-watered land. Some of these went up to New England, some by way of Nundle from the Hunter Valley, as Sempill went to settle the Walcha run in 1832, some over the Moonbi Range, as Edward Gostwyck took up his Gostwyck run in the same year. The invasion moved north quickly, with Tilbuster occupied in 1835, Saumarez in 1835, so defining the land around the future Armidale, while Campbell was out to Inverell in 1837, when Boyd took up Glen Innes, and Tenterfield run was taken up in 1839 by Robert McKenzie. This left Patrick Leslie to go on north to the Darling Downs in 1840. In 1839 there were 46 stations, in 1852 there were 178, and one million sheep; the land of the central grassy spine had been taken up, and only wooded land suitable for cattle was left on the eastern and western falls. For this was an invasion of sheep; these were prosperous men who could afford the more profitable sheep, and by comparison with the coastlands and the black soil plains to the west, this was ideal sheep country. It seems necessary to make this point, because cattle runs were more numerous than sheep stations in the great squatting expansion of the 1830s and 1840s.

Licences had been issued in 1836 at £10 per station, but few took them up, as the district was administered from the distant Macleay River. In 1839 a New England

pastoral district was formed and the new Commissioner of Crown Lands made his headquarters at Armidale, which soon had a courthouse, commissioner's home, police barracks, lockup, and store. The urgent problem was first to issue licences and define the runs, but also to find a route to the coast. From New England it was a journey of months with wool to Maitland and with supplies on the return journey. Meanwhile the timber trade had established ports on the closer northern rivers. Convicts made a road from Walcha to Port Macquarie, but the descent was so steep that erosion soon made it impassable. There was a route from Kempsey through Big Hill to Armidale, but Mrs Baxter's account of it in 1842 makes it clear it was no dray road. In 1846 the government made a poor road from Armidale to Grafton by way of Newton Boyd. However, it was the much easier route going from Tenterfield to Grafton which proved most successful, though a road was not made until 1859. Some in the north used it; most took the path to Maitland, by way of Liverpool Plains and Page's River. With its headquarters and outside links established, New England's population reached 2,200 people in 1846.

Some stations were part of strings of runs with headquarters and absentee owners in the Hunter Valley, but many owners dwelt on **their own** properties and made a vigorous gentry society. The first Armidale races were held in 1842. Few original homesteads survive – Salisbury and Ohio are 2 notable ones – and these, surrounded by outbuildings and a cultivation paddock for station wheat supplies, formed the centre of a ring of outstations each with its flock of 600 to 1,000 sheep, guarded by a shepherd and hutkeeper. As many as 40 men might be employed on such a station, many of them convicts taken illegally out of the settled districts. Grain might be ground by each man in his own steel mill but horse mills soon made an appearance, and soon also a few water mills. Many of the settlers were Scots, hence the place names, and there were more women than in most pastoral areas, lending gaiety and respectability to station life. It was not an easy existence, particularly during the great depression of the 1840s when stock had to be driven down to Maitland or Grafton for boiling down to pay expenses and interest on debts.

As the population grew, and it was a highly mobile one, village centres emerged to provide the origins of present-day urban settlement. Armidale had 76 inhabitants in 1846, with a post office, inns, a new courthouse, a new steam flour mill and a new church. A plan was gazetted in 1849 for the town, and the population had reached over 500 in 1851. This was the central administrative town, but New England was large enough to support other incipient towns. Tenterfield was marked by the George Inn and a store in the 1840s and was surveyed as a town in 1851, soon acquiring a courthouse and steam mill and receiving a boost from gold discoveries at Timbarra and Drake east of the town. To the south, the court of petty sessions was first placed at Wellingrove, but when town land was sold at this site in 1854 along with land at the site of Glen Innes, the latter sold best. The court was moved to Glen Innes, the doctor moved there and Wellingrove languished in a dead end while Glen Innes took the traffic on the main roads.

Meanwhile Inverell was not laid out until 1858, and had a courthouse and lockup by 1861. Uralla in the 1840s was merely Corey's Inn on the edge of Saumarez, but Walcha in

the south, with its safe waterhole, was a village in the pastoral era, with an inn, smithy, post office and store, with a blacksmith and butcher making up the necessary complement of a country centre. As life grew more settled the towns grew, and provided more services – Armidale opened an Academy and Day School in 1854 – and in 1847 the station owners obtained the 14-year leases under the Orders in Council that provided security of tenure.

Early gold discoveries

News of the gold finds at Ophir and on the Turon spread like wildfire, and the Rev WB Clarke had already visited New England and declared it to be on auriferous country before 1851. Suitable discoveries were immediately made.

There was a rush to Rocky River, near Uralla, in 1851, with 31,400 miners searching for pay dirt. At first it was an individual's field, but deep leads were discovered, companies and bands were soon at work, and by 1855 there were 5,000 on the field. Water races were constructed for sluicing, and Chinese arrived and built a joss-house. A smaller field opened on the Timbarra north-east of Glen Innes which kept 400 men at work through the 1850s, with many Chinese.

Gold was much more widespread. In the headwaters of the Gwydir were Mount Beef and Mount Mutton, and Glen Elgin, Ohan, and Oakwood grew as mining villages. On the western fall, a town was declared at Barraba in 1852. Its growth was encouraged by goldmining at Crow Mountain, Woods Reef and Ti-Tree. It eventually became a railhead and centre for a wheat and pastoral district, and was also supported by the Woodsreef asbestos mine until it closed in 1982.

Bingara was a small village offering a few inns until gold was found, a long continuing effect since the All Nations Gold Mine worked from 1880 to 1948, and a 10-head stamper battery still remains. Diamonds were also found here, most of Australia's production. The town was given a courthouse in 1879. Bingara gold also boosted Bundarra, on the crossing of the Gwydir River where a number of roads converge. Built on the site of Clerkness station taken up in 1839, it built a Horbury Hunt church in 1874.

The effects of gold were to push up meat prices and swell the local demand for available produce, so that 4,000 acres were already in cultivation by 1861 with steam flour mills at work in nearly every town. Small farmers found niches on government reserves and as tenants. The towns benefited, notably Uralla, which in 1859 had 3 hotels, a post office and a school. Inverell came into being, laid out in 1858, starting off with 2 inns, a church and a growing residential population, as increased farming on its fertile soils served the northern miners. The farming possibilities and its strategic location made it survive, as against the mining villages most of which are now abandoned. Generally, all the existing towns benefited from the increased population and mobility of the 1850s gold rushes, though the pastoralists found labour scarce.

Farming

New England remained a pastoral district until 1874, when it was divided into counties, a recognition of a new status. This began with the Robertson Land Acts of 1861, which

allowed the small farmer to invade the big runs at the end of their 1847 leases. There was much avoidance of this legislation in the colony as a whole, but it produced a genuinely new settlement pattern in much of New England. Here the run-holders had not the financial power of their colleagues elsewhere, runs were smaller, rents were rising, pastoralism was making new demands on capital for fencing and water conservation. So, while they peacocked, dummied and grid ironed in the expected way, most of the early large stations had shrunk by half by the mid-1880s. Big holdings survived to support mansions such as Saumarez, but they were part of a very mixed range of holding sizes.

Small farmers could take up to 320 acres at £1 an acre paid over time; after 1875 the maximum was raised to 640 acres. Most small farms were however from 50 to 100 acres. The basalt soils in the west, in the Inverell, Barraba, and Bingara areas drew many, but there were also good locations on the central tableland where towns provided a market eventually, by 1889, all provided with a railway to the Hunter and Sydney. Clearing land was a heavy task, and a lack of capital caused many failures, but those who succeeded grew wheat, maize, oats and potatoes. Wheat found a market in the western pastoral stations, particularly from Inverell. The introduction of the stripper in the 1860s and the reaper-binder, suitable for the moist summers, in the 1870s increased wheat acreage and the size of farms. Orcharding was very important, providing apples and cherries notably. An early cool store was built at Uralla to allow for an extended period of marketing by rail to areas with a warmer and less suitable climate for these temperate-zone fruits.

The arrival of the railway, at Armidale in 1883 and progressively northward until it reached Wallangarra on the Queensland border in 1889 meant the impact of better milling wheat from South Australia than could be grown locally in conditions of winter frost and summer humidity. Wheat disappeared from the central and eastern plateau, replaced by maize, oats and potatoes particularly at Guyra and orchards (particularly) at Armidale and Glen Innes. With the technological advance of dairying, this was seen as a suitable export industry, with factories at Tilbuster (1892), Glencoe (1893), Guyra (1893) and Glen Innes (1894). Other butter factories were located at Red Range and Tenterfield. Unable to compete with coastal butter, except in the local area, the industry contracted to a few central factories, as at Glen Innes, and failed to support a large number of farmers.

Probably more important, as the Morris and Ranken report of 1883 makes clear, was the emergence of larger grazing units than these smaller cultivation farms. Turning the tables on the pastoralists, new settlers used dummying and selection by minors (banned from 1875) to put together small grazing runs up to 4,000 acres and running up to 4,000 sheep. Formerly the land had been rated at 5 acres per sheep. Now, with more intensive use one sheep could be kept on 2 acres. Ringbarking intensified and fencing, introduced at Rockvale Station in 1851, became general and the shepherds disappeared. By 1880, most of New England was fenced, with a great reduction in labour costs. The effect of the Robertson Acts, in New England as in Monaro, was to create a new class of small grazier, who co-existed with the remnants of the old and huge stations surviving from

the pastoral era. The effect was a larger, denser population, cultivating 67,000 acres in oats for hay, maize, potatoes, orcharding and dairying by 1901, but more significantly, the new grazing class. This rural population reached its maximum in 1911; since then there has been retreat as the small farms have been abandoned and amalgamated. The locations of this dense rural settlement can be traced, as Smailes and Molyneux reported, partly by maps and aerial photographs, partly by ground survey of abandoned homesteads, plantations, graves and other evidence.

This was a period of major urban growth, impelled by larger population and output, by the railways and shaped by government investment particularly of the 1870s and 1880s, and characterised by the new and more elaborate architectural styles. Armidale had been gazetted as a town in 1849 and soon acquired inns, stores, churches and a courthouse. The Catholic and Anglican churches followed the Presbyterian church in the 1850s when both were replaced by elaborate cathedrals. A hospital was built in 1853 and a newspaper published from 1856. Already in 1861 it had a population of 4,200. The next 40 years saw major growth, from incorporation in 1863, and grand new buildings, ranging from hotels to a new town hall, courthouse and goal in the 1880s boom-style neoclassical architecture. The town was lit by gas from 1883, a product of the railway. In 1893 the Armidale School was opened, and in 1895 the New England Girls' School, marking its future as an inland educational centre. Armidale was reinforced as the regional capital.

To the south Walcha stagnated, being incorporated in 1891, and Uralla remained a rural small town with the demise of gold. Northward however, Glen Innes saw much rural development and benefited from the new tinfields. It was incorporated in 1872, had a road to Grafton which increased its trading significance, and built a hospital in 1875. The railway arrived in 1884, and the streets, formerly lit by kerosene lamps, were lit by gas from 1893. This was the period in which the main street buildings, and particularly the fine and elaborate town hall, were constructed.

The railway however had created a competitor in Guyra, a small village that was given a station and gazetted as a town in 1885. It has no earlier buildings surviving, but it provided a rival to Glen Innes, since the railway commissioners, seeking to draw traffic away from the port of Grafton, imposed special rates which allowed Guyra to compete with Glen Innes for local traffic. Only after a trade war, in which Grafton was defeated, was Glen Innes' disadvantage in rail rates removed. It remained, however, the larger town with intensive agricultural settlement around it.

Tenterfield drew fewer farmers, and enjoyed slower growth, being incorporated in 1872 and receiving the railway in 1886. It too benefited from access to Grafton and it was in the School of Arts there that Henry Parkes delivered his famous Federation Address in 1888. Inverell was a thriving agricultural town, its wheat industry little affected by the railway, and it received a fine town hall and courthouse in the 1880s. Bingara remained backward, surrounded by large pastoral stations, and was not incorporated until 1889. Its wheat industry is a product of the twentieth century.

These towns were mostly built of timber, though brick was increasing in the larger towns, not only in the main streets but in the residential area. The 'blue' brick was a

characteristic local feature. The towns were industrial centres, with common industries being tanneries, saddlery, flour mills (that at Glen Innes survived) soap and candle manufacture, brickmaking, foundries, wheelwrights and coach builders, clothing and boots and shoes, though some of these came under attack from Sydney when the railway arrived, though that brought gasworks to the larger towns. As well there were flourishing community activities: Freemasons, Oddfellows, Rechabites and other societies spread, as did mechanics institutes, literary institutes and schools of arts and many sporting clubs.

Recreation parks and ovals were formalised at this time. Above all, there was a new grandeur in the prominent buildings, and the emergence of a class of affluent people who generally made one residential part of the town their own, though still building in the vernacular Georgian style until the 1890s when Federation homes made their appearance. Schooling became more universal; private schools had existed before the new national schools of the 1860s, but the 1880s saw the proliferation of systemic public schools with compulsory attendance. Always supplementing these were the religious schools, though Catholicism was not strong enough in New England to provide the impressive religious and educational precincts such as one finds in Wagga Wagga. New England country towns largely saw their present-day landscapes come into being from 1861 to 1914.

Later mining

Gold continued to be found after the 1850s and added to the general air of development. Large capital still worked Rocky River, but there was also a small rush to Melrose that produced a small village. Even later, another settlement resulted from a rush to Kookabookra in 1889. The nearby fields at Tia supplied Walcha between 1887 and 1900. From 1872 to 1890, the settlement at Walcha also benefited from the field at Glen Morison. Together, Tia and Glen Morison only involved a few hundred miners. The major find was deep in a 1,000-foot gorge at Hillgrove east of Armidale. First antimony was found, then the Eleanora gold mine followed, with more as the field developed. Hillgrove township grew up on the hill, and at its peak contained some 3,000 people, while tramways with winding gear led to the shafts in the gorge. This boosted Armidale, though the storekeepers there lost an opportunity to set up branch shops in Hillgrove. Hillgrove worked gold from 1881 to 1921 and was working antimony until the 1970s. At its peak it supported a newspaper and 6 hotels, and an innovative hydro-electric scheme in 1894. A subsidiary town, Metz, also developed. Tenterfield received a boost from the Drake discovery of gold and copper in 1886, and gold and silver at Boorook.

Quite new however were the tinfields on the western fall discovered by a shepherd in 1872. The tin is alluvial, and was won by washing, sluicing and dredging, requiring water in an often-dry country, which led to impressive waterworks.

Vegetable Creek became Emmaville, which grew to a town from a mere hotel and store. The railway platform at Deepwater was put in to serve Emmaville and a settlement grew up there. Tingha was another major centre, which was big enough for a hospital and courthouse in the 1890s. The surviving 'Northern Dams' near Tingha indicates the

expense incurred to assure a water supply for washing tin. But tin was widespread and produced many settlements, such as Stannifer, Elsmore, Copes Creek, Mariaville and Torrington, which in turn had outlying centres at Curnow, Wallaroo and Bismark, now abandoned. A great depression in the 1890s reduced the price of tin and virtually destroyed the field, but Glen Innes in particular had benefited from its trade, as had Inverell. Towns such as Tingha, which was finally connected with electricity in the 1950s, demonstrate the area's longevity.

The twentieth century

Since 1911 the rural population has declined, and an increasing proportion of people are found in the larger towns where government at all levels is a major employer.

New England faced a problem of declining pastures from the late nineteenth century, due to overgrazing and the rabbit plague, so that it ceased to be breeding country and bought in wethers from the west for wool production. Sheep numbers fell from 4.9 million in 1900 to 3.2 million in 1935. Since then, the introduction of superphosphate and clovers for pasture improvement together with the removal of rabbits because of myxomatosis has greatly restored the breeding industry. Fat lambs are now a major product, with cattle predominating in the wetter country of the eastern fall. Agriculture has declined, oats being grown for green pasture and for hay, wheat has retreated west of New England, but potatoes are still grown, and a Kellogg's contract has led to renewed maize-growing in the Glen Innes area. Orchards have become less important, and the cool store at Glen Innes has closed down, though that at Armidale may still be used – these were the 2 chief centres for apple and cherry production.

The declining rural population has come from an amalgamation of holdings and the decay of secondary industry in the towns which are now merely service centres. Many small towns and villages have declined or disappeared with the coming of the motor vehicle from the 1920s on. Meanwhile Armidale has grown significantly, offering the best range of services and boosted by the teachers' college from 1928 and the foundation of a university college in 1938. This became a university in 1954 with the Wright's Federation Boolominbah homestead as its administration building.

This period has seen the end of the last remnants of the great pastoral holdings, and the rise of medium-sized grazing farms begin under the 1884 Act, but now considerably larger. Subdivision has been profitable for landowners but there was an element of compulsion and consumption after the 1895 Land Act. Thus, near Inverell, Myall Creek was subdivided into 138 farms in 1902, Byron was divided into 129 farms in 1906, and Inverell station was divided into 80 farms in 1910. After both world wars, soldier settlers were placed on resumed land: mainly near Uralla and Glen Innes after the First World War, more widely after the Second World War. Most of these subdivisions, like the new grazing holdings of 1884, have eventually proved too small. There has been amalgamation, leading to the present division of New England into medium-sized grazing holdings. As a result, the workforce which was necessary in an earlier period has been reduced.

New England has thus emerged in the 1980s as a rural grazing district supplied with a small number of country towns offering a range of social and commercial activities for the surrounding areas, and relying very much on government employment. Built into its landscape are the remains of many pioneering elements from abandoned homesteads, and mine sites to the still-functioning urban landscapes of the late nineteenth century. Perhaps Glen Innes is the place most strongly trying to capitalise on this past landscape for heritage tourist purposes, though Armidale is following suit.

7. Darling Plains

Only in the south-east are there well marked topographic boundaries, with the upper reaches of the Namoi, Macquarie and Bogan rivers, and with the Warrumbungles and the Nandewar ranges in the east separating the region from New England. Liverpool Plain has been included here, bounded on the south by the Liverpool Range. The western boundary recognises increasing aridity: the shire subdivision does not permit use of the boundary of the Western Division which is topographically well-defined.

The whole area is given unity by the rivers draining to the Upper Darling River and the great area of alluvial soils which these braided meandering rivers produce. These alluvials, ranging from deep open alluvial soils (black earths) on Liverpool Plains to sandy and gravelly ridges have been deposited by the Bogan, Castlereagh, Macquarie, Barwon, Namoi and Gwydir rivers. There are some distinctive subregions, such as Liverpool Plains, Macquarie Marshes and Pilliga Scrub. There are many tributaries and billabongs.

Farming is devoted to sheep grazing for wool, wheat and cotton-growing, with increasing amounts of oil and fodder grains. Oats are grown in the east, where also fat lambs are reared.

To the west the vegetation enters the area of mulga-acacia scrub of the semi-arid plains. In the centre and east, savannah woodland predominated, though now much cleared. Black cypress pine and forest red gum occur on ridges and in the Pilliga Scrub along with ironbark and bloodwood. For the most part, box associations predominate. There were extensive Mitchell grass plains, as on Liverpool Plains.

Local government areas

Bogan, Coonamble, Dubbo Regional (part of), Gilgandra, Gunnedah, Gwydir (part of), Liverpool Plains, Moree Plains, Narrabri, Narromine, Tamworth Regional (part of), Warrumbungle, Warren

Map 13   **Local government areas and boundaries of the Darling Plains historic region**

Introduction

This region embraces all that relatively level country drained to the Darling by the upper Bogan, the Macquarie, Castlereagh, Gwydir, Namoi and Macintyre rivers and Boomi Creek. Emerging from the passes over Liverpool Range one can see the 'sunlit plains extended', but this country can be harsh in drought: Henry Lawson could write in 1892 that 'the bush between Bathurst and Bourke is horrible. Draw a wire fence, and a few ragged gums, and add some scattered sheep running away from the train. Then you'll have the bush all along the NSW western line from Bathurst to Bourke'. He wrote of the railway towns 'consisting of a public house and a general store, with a square tank and a school-house on piles in the near distance', a harsh forbidding landscape. If the bush was to make poetry, it would not be here. These plains have attracted no regional historian, though local histories of some places, now mature towns, demonstrate local pride.

The plains were the vast range of the Kamilaroi tribe and its many sub-bands. Sturt found the Aboriginal people on the Macquarie River clean-limbed and stout, with pleasing and intelligent countenances. Nevertheless, when the country was occupied, there was fierce resistance. The tale of murder and massacre was half-hidden, but at least the Myall Creek massacre in 1838 is documented, when 7 settlers were convicted and hanged in Sydney. Eric Rolls records a 'battle' at Boorarnbil near the Pilliga Scrub. Simpson Davison recorded that when he took up his run on the Macintyre, he found 2 shepherds speared, and the graves of 5 others similarly disposed of. 'The blacks are daily becoming more audacious' was a report of 1842, and travellers' records of the time clearly indicate a fear of the Aboriginal people. The conflict was worse on the Gwydir and Namoi rivers, where conflicting reports suggest at least 25 Europeans were killed, and much loss of stock, while many Aboriginal people and settlers were wounded. The native police were sent to the area in 1849. Within 6 years Aboriginal resistance was quelled. The Aboriginal people remaining worked as stockmen, at shearing and mustering and in domestic services. To the west, the Bogan Aboriginal people were so fierce that government forbade settlement for 14 years, by when the tribes were weakened by disease.

The region was discovered by John Oxley, who was blocked by the Macquarie Marshes, then full, and made his way eastward across the region, finding the Castlereagh and Peel rivers, naming Liverpool Plains, and ascending into New England. Sturt in 1827 to 1829 descended the Macquarie and Castlereagh rivers and found them to flow into the Darling, but already the first squatters were over Liverpool Range. Mitchell in 1831 found the Namoi about the site of Boggabri, and went on to the Gwydir and the Macintyre, returning to report good pastoral land. Coxen explored the Namoi Plains further in 1835, reporting it all dead flat with few trees. Here was an area where exploration was useful to the squatters who came behind and who knew what to expect.

Pastoralism

The pastoralists entered from the south, either from the Hunter Valley by the pass at the head of Pages River or the pass from Cassilis to Willow Tree, or rounding the Liverpool Range on the west, moving north from Mudgee through Dubbo, an entry point. Cunningham's Pandoras Pass was little used. In 1827 there were cattle runs on Liverpool Plains, in 1830 Coonabarabran run was taken up, and the squatters pushed on north and west. In 1832 the Australian Agricultural Company pre-empted the best land on Liverpool Plains and drove the squatters on, some to New England, some into the plains. Werris Creek was occupied in 1836, but in that year and 1837 runs were also right out to the north, at Wee Waa and Moree. The eyes were picked out of the country very quickly, and later arrivals filled in the gaps. The Macintyre and Barwon were occupied about 1840, and the whole country was subdivided into large runs by 1848.

The movement north from Dubbo filled in the western area about the same time. In 1824 there was a station at Dubbo, but this was withdrawn as too remote, and a permanent run, Dulhunty's, was claimed there in 1833. The Macquarie River country was taken up in the 1830s. This was sheep country, while to the east and north cattle predominated. On the Dubbo side were the Wellington and Bligh pastoral district. Bligh had 53 stations,

570 people, 23,000 cattle and 146,000 sheep in 1839: given 10 acres per head of cattle and 4 acres for sheep, cattle occupied as much or more of the country, and this was particularly true of the Namoi and Gwydir pastoral districts. There were more cattle runs than sheep stations. The wealthy sheep owners had gone up to New England, which had very few cattle stations. The rough grazing of the plains, and the danger of dingoes, made the plains more suitable for cattle. And cattlemen, rather than sheepmen, disliked and were disturbed more by Aboriginal people, hence perhaps the ferocity of the struggle. The cattle were driven down to fattening pastures in the Hunter, or even Cumberland; Maitland exported much salt beef. Durhams were the most common breed. So in 1848, Liverpool Plains had 67 runs with sheep and 94 with cattle: the Gwydir had 26 with sheep and 70 with cattle. Cattle have generally been under-emphasised in accounts of the squatting occupation of New South Wales.

Early runs were often owned by absentees who lived in the Hunter Valley, Cumberland or the Bathurst area. This and the temporary licence regulations explain the absence of early impressive houses in the squatting districts. Rather, there were ex-convict or convict stockkeepers and shepherds living in huts. A sheep station might employ 20 men, a cattle station between 2 and 4, with cooperation between neighbouring runs at the annual muster. These were huge holdings, up to 200,000 acres. Cattle were therefore cheaper to keep, needing only a few men, a few stockyards, and a grain paddock. Droving meant more men: 4 men could take 350 cattle to the Hunter, 2 of them driving drays. Wool was more expensive to transport. The gold era in the 1850s saw a new demand for cattle in Victoria, high prices, and a new long-distance droving route in which Dubbo was the point of departure. Disappointed diggers meant more labour, and sheep steadily replaced cattle after 1860: wool was more profitable with high prices, fencing was coming in to reduce labour costs, and the dingo had 'succumbed to strychnine'. More owners came to live on their stations, and with security of tenure after 1847, better houses were built.

Urban development before 1850 was very limited, due to a sparse and poor population. Petty sessions were held at Tamworth, headquarters of the Australian Agricultural Company and an important droving point for stock coming down from New England. In 1851, Warialda on the Gwydir had a population of 45, and a court of petty sessions. Wee Waa, site of the commissioner's office, had a courthouse and lockup in 1847, and Dubbo had its early beginnings as a commissioner's headquarters and courthouse. Pockataroo and Canonba were very small villages. What the country did have, and it is very clear from travellers' accounts, is a multitude of isolated inns some of which, such as at Narrabri, developed into town sites, but most of which have returned to dust or been burned. These isolated inns were the mainstay of travel and local recreation and were to be found throughout the colony.

Gold

On these alluvial plains, gold finds were not to be expected. At Nundle however, and on the Peel River close to the mountains, there was a gold rush, beginning at Swamp Creek in 1851. At first this was a small man's rush, peaking in 1852 to 1856. Diggers went up to the plateau, where dams were constructed and can still be seen, and down the Peel

River, where Bowling Alley Corner was a subsidiary centre. The Company at first sold private licences to diggers, and then floated the Peel River Land and Mineral Company, with a capital of £600,000, of which most went to the Company for use of its land. It failed miserably, but gave a boost to Tamworth and the land, a small part of the whole estate, was subdivided for small farms. The Australian Agricultural Company had moved its headquarters to Goonoo Goonoo in the 1840s, but retained the bulk of its land throughout the nineteenth century, a barrier to the small farmer on some of the best wheat-growing land. Gold brought labour for the pastoralists, including many Chinese who were subsequently employed in ringbarking.

The period 1861 to 1900

A major development stemming from pastoralism was the timber growth of the Pilliga Scrub on over 5,000 square miles of country south of Narrabri. This sandy-soiled area was taken up in the 1830s and 1840s in some 30 large runs, often grassy forest with cypress pine on the ridges. The run-holders outwitted selectors and retained their runs – the soil was not good farming country.

By 1870 there had been no burning for decades, and acacia and cypress pine were spreading into the pastures. The pines spread rapidly, reducing or destroying grazing values. This was quite a general problem on the plains of New South Wales and the government invented special sub-leases at low rents for those who would re-clear the land. The splitting of holdings into homestead and resumed areas under the 1884 Lands Act accentuated the problem. By the 1880s, the Pilliga was a vast forest of pine, with ironbark coming through, and grazing was driven out. When rabbits arrived in 1891, the remaining settlers moved away. What had been grazing country now supported a timber industry and the Pilliga Scrub was dedicated to forestry in 1907 as Pilliga East Block and Pilliga West Block. Timber getting had begun, however, as early as the 1870s, and sawpits were soon replaced by steam sawmills in the forest, with their associated villages, the settlements being peripatetic as timber was cut out in one area. Barradine became the centre, but Narrabri and Coonabarabran also benefited. Pine was cut for flooring and weatherboards, ironbark for sleepers, fence posts and girders. The mills in the scrub persisted until 1951, when a series of great fires drove them to the margins of the scrub.

The Pilliga Scrub suitably splits the Plains into subregions. To the south-east is Liverpool Plains. Here the Company had its Peel River Estate of 300,000 acres, with centres at Goonoo Goonoo, its headquarters, Caines Creek and Killala (Tamworth). Urban centres were established as the railway reached through the Plains.

In 1861 Tamworth had a population of 654, both in the government town on the north side of the river and in the company town on the south side, where an Anglican church was built. Most of the good land was held as grazing land by the Company, and selectors mostly failed on the remaining land. They were inexperienced and usually in debt. Tamworth prospered as a traffic centre. Manilla, a successful selector area to the north, sent its grain south to Tamworth for milling. The railway arrived in 1873 and drew much of the northern wool traffic by dray to Tamworth. A Municipality was created in

1876, when Tamworth had flour mills, a tannery, butter factory, plaster works, brick and pipe-making, brewery, clothing and furniture manufacture. Its services included a hospital, post office and telegraph, courthouse, police station, 2 schools, 2 banks and 6 insurance brokers. In 1888, Tamworth was the first Australian town to use electric lighting.

Of the other towns in this area, Quirindi was the next to receive the railway in 1877. However, its strength as a wheat centre did not develop until farmers came into the district in the 1890s. Curlewis was a product of the line to Gunnedah in 1879. In 1885, when a plan was laid out, it was a village with post office and school. Werris Creek was also a railway town on the Tamworth to Quirindi line. It gained added importance when the line to Gunnedah made its junction here. The railway workshops were transferred here from Murrurundi in 1896 and a coal mine was opened to supply the railway. The railway attracted a meatworks in 1894, and local selectors created a local trade. The network of lines created by the railway enabled communication between townships that were growing as part of the area's agricultural development.

Running west to Dubbo, squeezed between Liverpool Range and the Pilliga Scrub, is a strip of land much of which was occupied by the Company's Warrah Estate. It was fertile and well-watered. Selection was popular here from 1861, particularly after the 1884 Act which broke the squatters' hold on much land. Coonabarabran stands in the headwaters of the Castlereagh River and provided stores and inns for pastoralists moving in from the Mudgee district. By 1858 there was a police station, and in 1860 the first town land was sold and a courthouse built. Selection encouraged settlement, and by the 1870s there were a post office, stores, inns, school, flour mills and newspaper.

Gilgandra and Gulargambone also came into being as a result of free selection.

The Dubbo district lies in the west. Early pastoralism was enhanced by a more varied land use and larger population with free selection from 1861. Small-scale mixed farming, using wheat, sheep and orchards, occupied the banks of the Macquarie and Talbragar rivers and numerous creeks. Small farming increased after the 1884 Act, and with resumption after 1894. By the end of the century, the era of big pastoral stations was over on the middle Macquarie and Castlereagh rivers but persisted further out in the Warren and Nyngan areas. Dubbo had been planned in 1849, when it already had a courthouse, inn and school. It benefited as the major crossing place on the droving route from the north going into Victoria, and a bridge was built in 1857, when it also had saleyards. When freezing became possible, an abattoir was built in the 1880s.

Dubbo was a prosperous town and brick buildings were common from the 1870s. The town became a municipality in 1871, though the town hall dates from 1883, and the railway brought a gasworks in 1881. The town boomed in the prosperous years of the 1880s, and much of its architecture is of this period. Dubbo acquired increased importance when the line to Bourke was built very fast to draw the river traffic down into New South Wales and away from South Australia.

Not all towns were completely dependent upon the railway. The new railway bypassed Warren, an established centre for marketing cattle from the north, and a new town,

Nevertire, was laid out on the line of railway. Warren lost its place on the coach route from Dubbo to Bourke. Up to this time it had thrived, with a post office in 1863, and also stores, inns, blacksmith, bootmaker, saddler, and butcher. Indeed, the *Town and Country Journal* described it in 1875 as 'the emporium of the lower Macquarie', with doctors, chemists and a bank. Its population in 1881 was 427. All this was threatened by the bypassing of the railway: Warren fought back, lowering its prices and charges, and demanding a link line which it obtained in 1898. Nevertire languished, a mere halting place in the plains. Warren meanwhile grew to 1,006 people in 1901. The town overcame the indifference of the railway commissioners.

Warren's assertiveness was not repeated further north. Canonbar (Canonba) had been one of the earliest villages but collapsed when bypassed by the railway in 1883; the people and businesses moving to the new town of Nyngan on the railway line. Until then, Nyngan had merely been a water reserve, and was chosen as a railway stopping place for that reason. By 1891 it was a municipality, a town hall was built in 1897, after a reticulated water supply had been laid on in 1895. In a few years the rail traffic it had came to equal the earlier town of Coonamble which had become a municipality in 1880.

On the northern side of the Pilliga Scrub the large plains stations were not troubled by selectors, though many took up their pre-emptive and auction rights to secure their head stations and water supplies. The 1884 Act began the reduction of the huge stations, but the real effect began with the resumptions policy that followed 1895, when small leases of 10,000 acres began to replace stations of several hundred thousand acres. The process of subdivision into the wheat–sheep farms of the present day had begun.

The early pastoral centre had been Warialda, home of the Commissioner for Crown Lands. A courthouse and lockup served the district from Warialda in 1850. A demand for a more central location led to an additional court at Moree in 1862, although a courthouse was built only in 1874 (replaced in 1901). The town of Moree was laid out in 1860, and soon eclipsed Warialda – in 1861 it had 2 inns, 2 stores, a post office and a pound, and a population of 43. By 1871 its population had reached 107, with 3 hotels, a butcher and a saddler and a school. These towns of the Darling Plains were the places of which Henry Lawson wrote. Major growth came in the 1880s, with more settlement and a fine Land Office to distribute it, a newspaper and 3 churches. Moree became a municipality in 1891. A list of its activities in 1902 may indicate the role of a plain's town of the time:

> 3 physicians, 2 dentists, 2 chemists, 4 solicitors, surveyor, photographer, jeweller, hairdresser, 4 stock and station agents, 7 tobacconists, undertaker, 2 bootmakers, plumber, 4 saddlers, 8 stores, 2 newspapers, 4 wool scours, engineering, coachbuilder, brewery, sawmilling, brickworks, private hospital, public hospital (built 1898).

Moree was the centre of an extension of the artesian basin, which has maintained a pastoral water supply in the region since the first bore was sunk at Moree in 1895. The margin of the artesian water has retreated westward due to depletion, and many wells are now capped to save water, or reduced to pumping. There are now about 250 artesian wells in the district. Moree's water is hot, and sustained the wool-scouring

industry until marketing wool in the grease became more usual, and is now being exploited as a tourist attraction.

Warialda meanwhile grew as a lesser town, but far enough from Moree to maintain a separate existence supported by subdivision of holdings. A hospital was built in 1862, a post office in 1880, and a new courthouse in 1882. Its main growth is due to twentieth-century increases in rural farms, and it does not contain the fine nineteenth-century buildings found in Moree, capital of the district.

The plains of the Namoi are served by Narrabri on the northern edge of the Pilliga Scrub, so that sawmilling has been important. Wee Waa was the earlier pastoral foundation, but a larger town grew on a water reserve made in 1880 on Narrabri Creek, an offshoot of the Namoi that provided a major water supply. Narrabri was on the droving route south, an important crossing place. By 1871 the population was 350, with stores, inns, a bank and a school. Settlement was stimulated when the railway reached it in 1882. The town became a municipality in the next year. In that year a courthouse was built. As in Moree, the town shows ample evidence of the boom-style architecture of the 1880s. The town hall built in 1893 is now demolished, but the oval's grandstand of 1900 still stands. The town is unusual in that it was given a large common in 1867: this was subdivided in 1967. At first the railway came to a station well west of the town, and the separate centre of Narrabri West sprang up at the railway. Narrabri West was added to Narrabri municipality in 1957, and the whole absorbed into Narrabri Shire in 1980.

The twentieth century

The twentieth century saw the destruction of the great pastoral holdings on the plains, and their replacement by large sheep stations in the west and north, and the spread of the wheat–sheep farm over most of the centre and east. Subdivision has come about in a number of ways. First, government has continued to resume land for subdivision, strengthening the 1895 Act with the Act of 1900. Under this for example, another 100,000 acres of the Peel River estate bordering Tamworth were transformed into small farms. Around Dubbo in the west the same process took place. Then the soldier settlement led to more small farms. Meanwhile, taxation and the rising value of land, aided by inheritance, has led to much private subdivision. This is particularly so as wheat has become a major profitable crop, quite unsuitable for the vast stations.

The early subdivisions however were made at a time when a small farmer might manage say 200 acres: there has been a corresponding process of amalgamation in the old selection and early subdivision areas, and even rural depopulation. Mechanisation has meant that wheat–sheep farms are several thousand acres, while the sheep holdings are 9,000–20,000 acres. The decisive shifts were the discovery of wheats which could withstand northern summers, culminating in 1946 with northern premium hard wheats which fetch high prices and allowed Moree to become the centre of a vast wheat-growing region; and the evolution of the wheat–sheep farm in the 1920s. Now half of Australian sheep is held on this type of holding. In safer country to the south-east, fat lambs are marketed, but wool is the chief livestock product over most of the plains. The

whole area has become a prosperous farming district at a medium density of rural population.

Meanwhile crop diversification has been the recent development, into sorghum, oilseeds, sudax, soybeans and cotton. The latter in particular, along the Namoi and Gwydir rivers, has benefited from large irrigation schemes drawing on the Copeton, Keepit and Split Rock dams on the western flank of New England. Wee Waa with its cotton gins, Narrabri and Moree with their oil-crushing industries, have most benefited as towns from this recent development. The larger towns have also drawn custom away from the smaller towns with the aid of motor transport. More than ever, Moree, Narrabri, Tamworth and Dubbo dominate the region, leaving heritage opportunities in many smaller centres such as Nundle and Warialda.

Tamworth has grown into the main centre, drawing both on New England and the Darling Plains custom for its specialist services, such as wholesaling and medical specialisation. ln 1911 a major new power station was built; another in 1931, and one of the last country power stations in 1956. These 3 stood side by side until they were demolished and replaced by a motel. During the Great Depression unemployed workers were used to beautify Oxley Park and build a flood mitigation scheme. A radio station worked from 1935. As a major inland town, the population doubled from 12,071 in 1943 to 24,500 in 1971, and the Dungowan Dam on the Peel River was needed to maintain a water supply. Tamworth is particularly rich in residential buildings from the late nineteenth century, though as a modern, growing town, its old centre has largely been replaced. Werris Creek has lost its functions as a railway workshop town, and with the transformation of the railway locomotives to diesel its mine also closed. It survives as a rural service centre, as does Coonabarabran, which enjoys tourist patronage from the nearby Warrumbungle National Park.

The Mount Kaputar National Park draws tourists to Narrabri, which retains much more of its main-street nineteenth-century landscape than Tamworth, though it too has grown, with 16,000 people in 1986. Moree is in a similar state.

The kind of community development that has occurred is indicated in the table following which shows the involvement of institutions to Nyngan, a virtually new railway town of 1883. It can be seen that Nyngan had acquired most of the necessary institutions of a nineteenth-century town by 1901, including a hospital. Tennis and cycling were early twentieth century 'rages' represented in the town, and a Red Cross Society was prompted by the war in 1914. The inter-war period of Depression saw the population remain static, but characteristic additions were made to services, including a power station, fire brigade and a golf club. Post–Second World War saw the population rise considerably, partly due to prosperous rural surroundings, but mainly due to an influx of employees of government services who are the mainstays of country town populations today. This was a period in which Nyngan was drawn into the business network with Rotary, Lions and Apex clubs being established. Education became more modern with a clear distinction between primary and high schools. And prosperity was sufficient to fund an Olympic pool. Spread of air services has given Nyngan an alternative to the railway, and train passenger services have been withdrawn. This table indicates the

growth and diversification of a small country town, which is not atypical, and which enriches and diversifies country life.

The foundation of the Country Women's Association in 1923 makes Nyngan one of the early branches of this organisation, now represented in most country towns though run from a Sydney headquarters.

The Darling Plains region exhibits classically the main processes that have shaped the cultural landscape. The building of a community, as represented in the following table, could be represented by well-chosen examples. This apparently endless plain has been turned to use by a sophisticated community, despite its howling droughts and destructive floods.

Table 1   **Growth and diversification of Nyngan**

Development	Year	Comment
Inn	1881	Stopping place for Cobb and Co
Police station	1882	
School	1882	
Railway	1882	
Bank	1883	Blacksmith, Stores
Newspaper	1883	
Church of England	1883	
Oddfellows Hall	–	
Whist club	1888	
Municipality	1891	
Catholic church	1891	
Population	1891	1,355 people
Town band	1892	
Doctors	1890s	
Methodist church	1894	
Hospital	1897	
Commercial water	–	
Steam pump	1895	
Races	1898	
Masonic lodge	1898	
Population	1921	1,375 people
Country Women's Association	1923	

Development	Year	Comment
Power station	1926	
Golf club	1927	
Leagues football club	late 1920s	
Volunteer fire brigade	1935	
St Vincent de Paul Society	1939	
Bowling club	1943	
Population	1956	2,360
Swimming pool	1952	
Lions Club	1955	
Returned servicemen's clubhouse	1955	
Rotary Club	1963	
Apex Club	1963	
Boy Scouts	1959	
Girl Guides	1960	
Nyngan and District Historical Society	1966	
Aerodrome	1969	
High school	1974	

Conclusion

The Darling Plains can at times seem rich and hospitable, at other times drought-prone and harsh. The early squatters found cattle the best stock for coarse grasses, and only as the fodder changed and wool prices increased did it become a major wool-producing area. Wheat growing, hampered by high summer rainfalls, entered the region only slowly, first on the eastern boundary with New England, but spreading with new breeds to encompass virtually the whole area, now dominantly in wheat–sheep farms with the break-up of the vast pastoral stations. While Tamworth and Dubbo had a gateway role for entry to the region, other subregional centres have sprung up, notably Coonabarabran, Narrabri and Moree. Smaller towns have been created by the railways. Central to the region is the Pilliga Scrub, a man-made forest which Eric Rolls has brilliantly described in *A million wild acres.*

8. Central Tablelands

The region is a flat plain elevated by uplift and containing parts of the central tablelands and central slopes. It represents an area of early occupation, mostly within the 'limits of location' of 1829. It consists of a number of level tablelands separated by ranges dropping generally in altitude towards the west. Except in the west, there are good topographical boundaries, though the regional boundary follows the local government areas.

Rugged land exists in the Canobolas area, along the Abercrombie and Turon rivers, both goldfields, and in the east. Part of the area drains to the east through the Coxs River, but most to the west by way of the Macquarie and Upper Lachlan rivers.

The western boundary separates the slopes from the inland plains. On the east lie the Blue Mountains, the Jenolan Uplands and the Rylstone Upland. For the rest, it is mostly undulating or level country.

Originally this was timbered land, with dense forests on the upland and open forest country on the rolling and level plains. Box associations are most common, with she-oak and manna gum along the rivers.

Local government areas

Bathurst Regional, Blayney, Cabonne, Cowra, Dubbo Regional (part of), Lithgow City, Mid-Western Regional, Oberon, Orange.

Map 14   **Local government areas and boundaries of the Central Tablelands historic region**

Aboriginal people

European settlement in these south-eastern parts of the region was tentative because of apprehensions about resistance from the Aboriginal people. Members of the Wiradjuri linguistic group had occupied on a seasonal basis most of the Macquarie River area. They moved regularly in small groups but preferred the open land and used the waterways for a variety of food. There are numerous river flats where debris from recurrent camps accumulated over a long period. Naturally the focus of settler attention was on many of the areas most favoured by the Aboriginal people. There was some contact, witnessed by sporadic hostility and by the quantity of surviving artefacts manufactured by the Aboriginal people from European glass.

The apprehensions of early settlers, whether justified or not, were real enough. They are demonstrated in 1831 by Captain Steel withdrawing his family from the exposed farm at Rockley to Perthville close to Bathurst. But even around Bathurst apprehensions persisted: in the mid-1830s Major-General Stewart erected a battlemented defensive screen on his brick house at Mount Pleasant (now Strath) on the Ophir Road north-west of Bathurst.

By 1840 apprehensions about dangers from the Aboriginal inhabitants had abated and there was widespread dislocation of Aboriginal culture. Blankets and other government supplies were still being handed out to Aboriginal people at Mudgee in the 1840s. Corroborees were still held on the hills around Mudgee in the 1850s. But these were the last signs of an independent Aboriginal presence. The destruction caused through resistance was aggravated by disease, alcohol and the gold rush.

European settlement

In 1813 George Evans crossed the Blue Mountains, looked upon the Central Tableland and found it good: 'I am more pleased with the Country every day. It is a great extent of Grazing land without being divided by barren spaces as on the East side of the Mountains, and well-watered by running streams in almost every Valley'. Though timbered, the rolling plains around the Macquarie River were open, with long visibility and an encouraging quality of grass. The new colony's need for new expansive grazing land was the prime mover in the early colonisation of the tableland and the establishment of the early towns. The initial settlement was controlled by Governor Macquarie in 2 ways. One was the reservation of the land west of the Macquarie River for government stock and government agricultural stations, with convict workers and military overseers: the other control was the limited use of land grants and grazing permits to individual colonists.

Under Macquarie and Brisbane, private occupation was restricted to the east bank of the Macquarie and Campbells rivers: Bathurst, on the further bank, was a government station from 1815 onwards, while Kelso, on the east bank, was developed from 1818 onwards by small settlers. In 1823, Wellington Valley, 190 kilometres to the west, was created as a new, remote convict stock station 'far removed from the undue interference of settlers and all the comforts of civilised existence', as Governor Brisbane said.

The basic purpose of opening up this large area was to breed cattle. The letters of John Maxwell, the superintendent of government stock from 1823 to 1831, give a vivid glimpse of the day-to-day handling of bulls, cows and working oxen. Horses and some sheep were necessary and the need for some self-sufficiency created paddocks of wheat and maize, with a small tobacco industry at Wellington.

Because of the distance separating Wellington from Bathurst, an intermediate station was established in the mid-1820s on Fredericks Valley Creek, near the later town of Orange, but the character of the region was about to change rapidly. The entire region was opened to private settlement when Governor Darling redefined the 'limits of location' in 1826. The eastern sector of the region along the Fish River and the eastern

bank of the Macquarie was settled by sheep farmers by 1820. The area to the west had been largely cattle country and Wellington remained so into the 1830s, but the opening up of the area west of Bathurst had by 1828 produced a 4:1 ratio of sheep over cattle in the region as a whole.

In the 1820s and 1830s more and more convicts completed their sentences and sought land: simultaneously, free migrants, qualifying for larger land grants, moved west. The shape of pastoral development on the tableland was fundamentally changed by the new settlers and their flocks along Campbells River to the south, where Thomas Arkell, a superintendent of government stock, built up an estate of 10,000 acres by 1839 and the Pyes built the fine soapstone homestead of Bunnamagoo in 1831. Captain Steel opened up Rockley after 1829 and Burraga was initially exploited by the Redmonds, Behans and Browns.

Homesteads and early townships

As the Aboriginal way of life vanished the large pastoral properties around Mudgee were developed. The Lawsons at Putta Bucca, Coxes at Munna and Burrundulla, the Lowes at Wilbertree, the Rouses at Biraganbil and Guntawang, one of the Suttors of Brucedale at Triambil all established significant runs with significant homesteads. The areas in the north-east, later known as Rylstone and Wollar, were grazed by the flocks and herds of a prominent emancipist, Richard Fitzgerald, while further south Bowenfels and Lithgow Valley became a Scottish enclave of Andrew Brown, Thomas Brown and the Rev Colin Stewart. Fellow Scots, the Walkers, opened up the Lue area in the north-east while both the Walkers and Andrew Brown of Cooerwull began in the 1830s the link between the Central Tableland and that part of the Darling Plain to the north that was watered by the Castlereagh. The extension of pastoral interests beyond the 'limits of location' meant that by the 1840s the Central Tableland was no longer primarily a frontier area looking back to the Blue Mountains and the coast, but also a major commercial centre for the plains to the north: Andrew Brown each year drove his flocks from the Castlereagh to Bowenfels for shearing in the stone shed at Cooerwull.

More intensive European exploitation of the region created a need for villages and market centres. The surveyors laid out the plans for many projected villages throughout the areas in the 1830s and 1840s. Despite the usual false starts, when sites proved unattractive for urban development, the familiar towns of the area mostly had their physical origins before 1850: Bathurst in 1833, Mudgee in 1837, Carcoar in 1838, Rylstone in 1842, Orange and Wellington in 1846.

Gold

The impact of the 1850s was more dramatic on the Central Tableland than anywhere else in New South Wales. Ophir, Lewis Ponds Creek, Sofala, Hill End, Wattle Flat, Trunkey, the names to conjure with in early gold-rush history, all lie within this region (either in Cabonne or in Evans shire). The effect of the gold rush on other regions was one of dislocation as people hurried off to the goldfields. On the Central Tableland this dislocation was also evident – Rockley, for example, was gazetted as a township in 1851, but did not fulfil the balanced commercial development of a country town. But uniquely

on the Tableland, the massive influx of transient miners, their followers and the new requirements of new towns beside the mines created an exciting and tumultuous period of resettlement which has been the focus of national interest.

The cosmopolitan population at the new town of Sofala in 1851–52 and the frantic activity first in alluvial and then over the following decades in shaft-mining for gold, ended the pastoral backwater of the Suttors and the Richards family. In the 1870s the exponential growth area moved to Hill End-Tambaroora. Hill End township had 28 hotels and 5 banks by 1872 and a population of 8,500, twice as many as the old-established Bathurst. Throughout the 1870s Hill End dominated the eastern section of the goldfields but the yield from the mines above Sofala and on the dry gully country around Wattle Flat remained high and eclipsed Hill End from the 1890s until the First World War.

The southern end of the goldfield, around the Abercrombie River near Trunkey, had a less dramatic history, with alluvial mining in the 1850s and a slow capitalisation of serious reef mining. Trunkey rose to prominence slightly before Hill End. Its first major reef was exploited in 1868 and off and on over the 1870s, late 1880s and late 1890s there was a great deal of activity and investment in the Trunkey and Copperhannia field. Unlike Hill End, Trunkey township did not blossom into a major conurbation but retained more stability than Hill End: it remained, and still remains, much as it was in 1872 before the major activity but after the initial euphoria.

The impact of gold seeking on the southern sector of the region was partially matched by the discoveries around Mudgee in the north. The Hargraves reef, with alluvial pickings in Meroo and Louisa creeks, was discovered, like the Turon area, in 1851 and reef mining with overseas capital began on a large scale earlier than at Sofala and Tambaroora. The township of Hargraves was declared in 1860 as the administrative centre of the Meroo Creek mining field but had already existed in the 1850s with substantial houses, a police station and a national school. The area to the south, around Pyramul Creek, was also explored successfully for gold in the 1850s and creeks such as Campbells, Long and Clarkes brought many European and Chinese miners to the new settlement of Windeyer. All this was overshadowed in the 1870s by the spectacular growth of Gulgong. In the single year 1872 the mines around Gulgong produced twice as much gold as the Meroo field produced in half a century. After 1877, however, Gulgong declined and, although producing gold for another 20 years, was much less significant than the Turon mines at Hill End, Sofala and Wattle Flat in that period. The Meroo field also displayed more staying power, with Chinese and European fossickers picking over the claims in the 10 years up to 1888, followed by substantial reef mining. The best years for shaft mining at Hargreaves were the decade 1894 to 1903 and at Windeyer the 23 years between 1894 and the First World War.

The area around Orange also saw recurrent gold fever. The geology of Summer Hill Creek, near the government stock-station of Fredericks Valley in the 1820s, produced a distinctive gold in company with antimony. As elsewhere, alluvial mining was soon followed by the sinking of shafts and, as elsewhere, the fortunes of Lucknow rose and fell. The landowners, WC Wentworth (an absentee) and Andrew Kerr of Wellwood (a resident) encouraged the early phase in 1851, but the real gold-rush came to Lucknow

only in the 6 years 1862 to 1867, when the land was sold and many speculative mining companies sank shafts. The principal character of this period, WH Newman, again reached prominence with new deeper workings 20 years later, from 1882 to 1888. New investors and new technology reactivated the Lucknow field in the decade after the 1889 slump but the prosperity of the mines and the township of Lucknow never returned after 1900.

There were thus 5 major areas of goldmining within the region, operating with varying success from 1851 until the First World War and beyond: the Turon/Macquarie area (Sofala, Wattle Flat, Hill End, Tambaroora, Chambers Creek); the Meroo/Pyramul fields (Hargraves and Windeyer); Gulgong; Lucknow; and Trunkey. The relative significance of the gold-producing areas is shown in the following table covering the period from 1850 to 1920 decade by decade.

Table 2   Relative significance of gold-producing areas from 1850s to 1910s

	1850s	1860s	1870s	1880s	1890s	1900s	1910s
Sofala	Significant	–	Significant	Significant	Moderate	Moderate	Minor
Hill End/ Tambaroora	Moderate	Minor	Critical	Moderate	Moderate	Minor	Moderate
Wattle Flat	Moderate	Minor	Moderate	Moderate	Moderate	Minor	Minor
Hargraves	Moderate	Minor	Minor	Moderate	Minor	Minor	Minor
Windeyer	Moderate	Minor	Minor	Moderate	Minor	Moderate	–
Gulgong	–	–	Major	Moderate	Minor	–	–
Lucknow	–	Significant	–	Significant	Moderate	–	–
Trunkey	–	Minor	Moderate	Minor	Moderate	Minor	Minor

Turon was the most successful in the 1850s and 1870s, the Meroo/Pyramul field in the 1850s and 1880s. Gulgong burst on the scene in the 1870s. Lucknow appeared in the 1860s and again in the 1880s, while Trunkey had mixed fortunes with investors best rewarded in the 1870s and 1890s.

Such mineral wealth over so long a period might have prompted the growth of major towns, but in fact had very variable results. The mushroom growth of Hill End did not endure (though the town retained a borough council from 1873 until 1908 and was thereafter the administrative headquarters of Turon Shire council until 1977). Trunkey never became a major centre at all. The moderate growth of Gulgong did not produce a town of importance but discouraged the development of Mudgee in the nineteenth century. Mudgee was just too far away from the goldfields. Only Orange, very close indeed to Lucknow, benefited permanently from the gold of the tableland: the banks of Orange received half a million dollars from the Lucknow miners in the mid-1860s.

The railway and urban development

In the middle of the mining period the railway reached the Central Tableland. There was the customary politicking among the townships over the preferred route westwards

from the Lithgow ZigZag in the 1870s and 1880s. The result was the extension of the main line west to Bathurst in 1876, to Blayney later in the same year, to Orange in 1877 and to Wellington 2 months later. Molong failed in its efforts to be on the Orange to Wellington line and relapsed into torpor.

A rail-link north from Lithgow to the Mudgee area was not achieved until the 1880s. The new track from Wallerawang reached Rylstone in June 1884 and Mudgee 3 months later. Mudgee, which had not greatly profited from the adjacent goldfields, had mixed results from the new railway: as elsewhere the convenient transport to and from the coast gave useful new markets for local agricultural produce, but also encouraged the import of manufactured goods from Sydney at competitive prices, which helped Mudgee purchasers but gave stiff competition for Mudgee manufacturers. The railway did not get beyond Mudgee for a quarter of a century, reaching Gulgong in 1909 and Dunedoo in 1910.

The south-west of the region was served by a branch line from Blayney (on the main western railway) to the main south line at Demondrille Junction that was opened in 1888. This line ran through Carcoar, Mandurama, Woodstock and Cowra. It is interesting to compare the effects on Carcoar and Cowra. Cowra benefited greatly, gained municipal status in the same year, 1888, and shook itself free of Blayney. Carcoar, much closer to Blayney, suffered the reverse: Carcoar had been laid out in 1838–39 as a rural centre not only for the Icely estate but for a wider area of the Belubula and Lachlan valleys. By 1850, just before the gold rush, Carcoar had 500 inhabitants, and was second only to Bathurst in size: there was a thrice-weekly coach service between the 2 towns. Although there was a little gold in Carcoar the gold rush bypassed the town which stopped its growth in the 1860s. The period from 1876 (when the railway reached Blayney) to 1888 (when the line was finally extended to Carcoar), was one of further isolation: the entrepreneurial developments that made Blayney by 1888 'destined to figure among the larger towns of the central country' (as the *Aldine Centenary History* claimed) largely passed Carcoar by. After 1866, when 600 people lived in Carcoar, the population slowly declined and plummeted from 535 in 1911, to 263 in 1921. The result has been a well-preserved small tableland township in a scenic part of the Belubula River, in sharp contrast to the continuing, unsympathetic development of Blayney with almost 4 times the population.

On the main western railway line Orange and Dubbo (beyond the Central Tableland region) were the principal growth areas. Wellington succeeded in having the large railway running sheds erected there rather than at Dubbo, but it failed to gain a high school under the Public Instruction Act of 1880: the 2 country high schools opened in 1883 were located at Bathurst and Goulburn. The town developed but with deliberate speed. A visitor described it in 1896:

> Wellington has the name of being the slowest town in the Western district. The town is built in a straggling fashion, and the public buildings are here, there and everywhere. No one seems to be in a hurry in Wellington and the streets are always quiet, yet a steady trade seems to be done by the business people of the town and there is no sign of poverty or privation. There is a lack of enterprise, in short stagnation is the term most appropriate to the life of the district.

Stagnation was not the impression given by Orange, in the heart of the tableland. From slow beginnings in the 1840s on a sloping site without a reliable watercourse, Orange had become a focus for a farming hinterland in the 1850s and a banking centre for Lucknow gold in the 1860s. It had been incorporated in 1860, although still a fairly marginal case, with only one-fifth of the population of Mudgee. By 1864 it was half the size of Mudgee. By 1866 the wheat industry had stimulated the building of 3 flour mills; 10 new hotels joined the 4 of 1860. Orcharding pears, apples, cherries and plums in the Pinnacle area, still a major cash-crop, developed steadily and by 1871 Orange had some 1,500 inhabitants. After the railway came in 1877, however, Orange enlarged rapidly, with a particularly grandiose business area in Summer Street. The strong, prosperous Irish Catholic community in Orange played an exceptional role in civic and business life led by James Dalton, the storekeeper, who in 1876, in expectation of the railway, built his country house of Duntryleague next to the town, the most splendid house of any Irishman in colonial Australia, equalled only in 1902 by Kangaroobie in Cabonne shire built by James Dalton's son Michael.

Although suffering from a very inadequate water supply until after 1890, Orange blossomed with fine public, ecclesiastical and private buildings in the last quarter of the nineteenth century. The opening of the Crown Lands Office confirmed the premier position of Orange in the Central Tableland in 1855. The prosperity of the fruit industry helped to cushion it against the collapse of the Lucknow goldfields in the late 1880s and the general bank crisis of 1893. Population grew steadily from 2,700 in 1881, to 5,000 in 1891, and 6,300 in 1901 (including East Orange in the figures).

Industry and mining (other than gold)

The railway was a useful catalyst in allowing Bathurst, Orange, Blayney, Wellington and Mudgee to fulfil some measure of their different potentials. At Lithgow it transformed, almost instantly, a pastoral backwater into one of the major industrial towns of New South Wales. Because heavy freight could be easily transported by rail the value of Lithgow's coal reserves could for the first time be realised. Both to fuel the steam trains from 1869 onwards and to power secondary industry within Lithgow Valley, the Western Coalfield was feverishly exploited. The coal supply prompted James Rutherford to open rolling-mills to recycle scrap iron into rails for the extending western line. Because of the availability of iron ore and limestone, Rutherford also built a short-lived blast furnace to smelt native iron.

Lithgow developed 3 smelters for copper ore: the central tableland has the longest history of copper mining in New South Wales. There were a great many discoveries of copper ore from the 1840s onwards. The principal exploitation took place in the following sequence, much of it lasting intermittently into the twentieth century. The Copper Hill mine at Molong was the earliest metalliferous mine opened commercially in New South Wales and the consequent interest in copper is part of the copper rush that transformed South Australia in the 1840s.

Table 3   Sequence of mines opened for extraction of copper

Year	Location
1845	Copper Hill (south of Molong)
1847	Summerhill (Rockley)
1849	Byng (or Cornish Town)
1850	Carcoar
1862	Cadia
1870	Cow Flat
1873	Milburn Creek (Cowra), Wisemans Creek (Brewongle)
1874	Apsley
1876	Sunny Corner
1877	Burraga
1881	Blayney
1895	Larrys Hill or Phoenix (north of Oberon)
1898	Tuglow (south of Oberon)

These copper mines have almost all left archaeological remains, including some on-site processing plant, out of proportion to their economic success. Cadia's beam-engine house and associated remains have recently been assessed as of national significance because of 'the high level of integrity of the surviving structural elements, and the physical evidence of the mine layout, combined with the presence of unique components of the engine and crushing machinery'. There is nothing quite comparable on the other sites, but the pine plantations which today replace the devastated native forest that fed Burraga's reverberatory furnaces a century ago make a contrast to the barren, poisoned hillside at Sunny Corner, still today almost sterile from the smelting of complex silver ores containing both lead and arsenic. Sunny Corner and Dark Corner together produced gold, silver, zinc, antimony and copper: there was a minor gold rush in the decade following 1865, copper mining from 1876, silver-smelting from 1883 and after lean years from 1896 to 1916, zinc was mined along with silver from 1917 onwards.

The other major extractive industry of the tableland was oil-shale. The deposits at Hartley Vale, Torbane and Airly, Newnes and Glen Davis (together with Mount Kembla in Illawarra and Joadja in Wingecarribee shire in the Sydney region) dominated nineteenth- and early twentieth-century shale-oil extraction in Australia. Hartley Vale led the way in 1865. Airly and Torbane, in the Colo wilderness area west of Capertee, flourished as a mining community from 1883 but declined after 1908 and died by 1918. Newnes in the remote Wolgan Valley opened in 1906 and continued until 1922. In an attempt to counter wartime oil shortages its refining equipment was moved to Glen Davis in 1939. The Glen Davis venture, though never an economic success, closed only in 1952.

Conclusion

Since the 1920s there has been a massive decline in mining and associated industry on the tableland. Lithgow benefited from the first Australian steelworks, opened in 1900, and from the first modern blast furnace for iron ore built by William Sandford in 1906–07. The ironworks at Lithgow was operated by the Hoskins family, from 1908 until the transfer of the blast furnaces and the rolling plant to Port Kembla after 1928.

The First World War had assisted Lithgow's woollen industry by the grant of the khaki contract to the mill which the grazier Andrew Brown had founded in 1867 and the creation of the Small Arms Factory has supplied lasting employment in the town. But the coal mines have closed one by one, all the heavy industry in Lithgow has gone and the present success of the town owes much to the 2 electric generating stations (Wallerawang and Mount Piper) and their new open-cut coal mines. The woollen industry closed in Lithgow in 1973, although Macquarie Worsteds, which had had a mill in Orange since 1925, moved their headquarters to Orange in the postwar period, so the region as a whole retains a significant woollen industry. Kaolin extraction remains an important specialist business at Home Rule and cement at Kandos and Portland. Orange expanded as an industrial centre in the 1940s and 1950s with Email opening a large refrigerator factory: Lithgow had pioneered refrigeration with TS Mort's plant in Oakey Park in 1873 but, as an old Lithgow man complained in 1942, 'Lithgow's a place where things start off all right and then just fizzle out'.

There has been a lot of fizzling out on the central tableland: most of the brickworks, potteries, flour mills, ironworking and mining for coal, gold, silver, lead, zinc, molybdenum (at Mount Tennyson), diamonds (on the Cudgegong), shale oil and copper have disappeared, leaving material heritage of great complexity, importance and, sometimes, splendour. The towns founded primarily to service mining communities are all ghost towns or small hamlets: Trunkey, Hill End, Sofala, Glen Davis, Newnes, Airly, Hartley Vale, Home Rule, Windeyer, Hargraves, Lucknow, Byng, Mount David, Burraga. Tourism, dependent partly on the heritage of mining, has enabled Carcoar, Gulgong and Millthorpe to survive and has breathed school-excursion life into Hill End and Sofala. Wellington's limestone caves have a modest tourist success, but it is the primary growth-centre towns of Bathurst and particularly Orange which through better facilities, good secondary and tertiary educational institutions, airports and government decentralisation have expanded in recent years.

9. Lachlan

This comprises the main area of the Lachlan River basin above Euabalong, flat, with a slight fall to the west with occasional hills composed of granite intrusions. Lake Cowal and Lake Cargelligo are eastern expressions of the lakes found in western New South Wales. This is therefore a transitional area to the semi-arid plains of western New South Wales. The northern boundary comprises the watersheds of the Lachlan and Bogan rivers. The eastern boundary follows the area of more reliable rainfall and older settlement – this has been a marginal area during the twentieth century. The Lachlan River here takes on a typical semi-arid form, meandering sluggishly. The rainfall is light to very light.

The vegetation is an inland forest of hardwoods, including pine, ironbark, grey, red and yellow box, with river gum along water courses: fodder shrubs such as belah are also present.

Land use is principally grazing, large-scale wheat and oats. The western part of the area is marginal for wheat with lucerne along alluvial flats.

Mining was important in the past at West Wyalong, Parkes and Forbes, Grenfell and Peak Hill.

Local government areas

Bland, Forbes, Lachlan, Parkes, Weddin

Map 15   Local government areas and boundaries of the Lachlan historic region

Aboriginal people

The Lachlan is part of Wiradjuri country. These 'people of the 3 rivers' occupied all the land from south of the Murrumbidgee to north of the Lachlan as far as the upper reaches of the Macquarie. The Wiradjuri language united a large number of smaller groups and distinguished them from their neighbours on the western plain, the Barkindji, or north of the Macquarie, the Kamilaroi.

The 3 rivers gave plentiful and consistent food supplies, supplemented by hunting kangaroos and emus and gathering fruit, tubers and nuts on the plains. The majority of meeting places and sites of special significance lie along the rivers. On the central plain there is a series on either side of the Lachlan and 2 more sites of significance on the headwaters of the Bogan. There is a high concentration of surviving carved tree sites in Wiradjuri country, principally between the Macquarie and the Bogan, on the Darling plain and the central tableland, but a dozen burial trees are known along the Lachlan or

on the adjacent plains, along with some twenty other carved trees (Camm and McQuilton 1987).

Aboriginal people remained very numerous on the Lachlan plains for decades after European settlement. Sarah Musgrave, in extreme old age, recollected how in about 1840 'a thousand Aborigines came to the station [of Burrangong just south of this region] and pitched their camp close to the homestead' (Musgrave 1973:13) and both in the Young area and in the Bland the young Sarah took for granted a great deal of contact with the Wiradjuri, both in employment on the stations and while living a more mobile existence. Corroborees continued for an indeterminate time, but, as all available land was occupied by European stock and European crops, traditional ways became impossible. Unlike some areas, however, the Wiradjuri retained a strong sense of relationship to their rivers and their plains, but, as elsewhere, found it increasingly difficult to live outside the new European towns. On the Lachlan plain the principal Wiradjuri communities are to be found at Lake Cargelligo, Condobolin, Peak Hill and, in smaller numbers, at West Wyalong, Forbes and Parkes. A very high degree of marriage within the Wiradjuri community to the exclusion of other Aboriginal groups has helped to preserve this sense of identity and the Wiradjuri Aboriginal Land Council and Cultural Resource Centre, established in 1982–83, became vital focal points for the original people of the Lachlan plain (Camm and McQuilton 1987).

European discovery and settlement

The central plain is dominated by the Lachlan River. This critically important waterway winds westwards through the heart of the plain, from Forbes to Condobolin, turning southwards to form part of the western border of the region.

Beyond Lake Cargelligo the Lachlan turns south-west to join the Murrumbidgee eventually west of Hay in the western plains region. The northern boundary of Parkes and Lachlan shires is essentially the watershed of the Lachlan and Bogan tributary system. The grazing potential of the Lachlan plain attracted attention long before the area was opened up officially for settlement in the 1840s.

The Lachlan River had been discovered and named as early as 1815, but the discoverer, Surveyor Evans, had not gone further west than Eugowra, which is right on the eastern border of the heritage region. When Oxley explored part of the Lachlan plain in 1817 he made a large circuit from Forbes and Bogan Gate south-west to Griffith, then north to discover Lake Cargelligo (which he named Regent's Lake) and then along the Lachlan to Kiacatoo, which is 40 kilometres west of Condobolin. Going north from the river he passed close to Peak Hill and on to Wellington.

In the 18 years between Oxley's exploration and Thomas Mitchell's, pastoralists brought their cattle onto the plains. The first European child born in the Forbes area was Mary Anne Higgins on Nanima station in 1823. The Grenfell area to the east was still in 1833 occupied solely by Aboriginal people, but in 1834 the Woods, father and son, arrived and, after establishing good relations with the Wiradjuri, established Brundah station (for the father) and Moonbucca (for the son). When the run of Iandra was added, the Wood family was occupying more than 68,000 hectares of south-east plain before 1840.

The area, known originally as The Levels, an apt description of this south-west area, was pioneered by a very determined widow, Harriet Regan. Joined later by her 3 sons, she came west from the Goulburn area in 1835. She was not quite the first settler, for Mr Glass had come to The Levels a year earlier, but she was the matriarch of a dynasty of Lachlan notables. It was Harriet Regan who gave the name The Bland to her property, after her flamboyant Sydney physician, Dr William Bland, and subsequently the whole district east of Wyalong became known as the Bland.

Harriet's son John Regan was a vigorous explorer, who more than anyone in the 1850s became familiar with the western part of the central plain. Like his mother, he had a flair for the unexpected placename: in 1858 in a fit of exasperation at losing his way back to camp near the site of Ungarie, he called the creek a 'humbug', so that to this day Ungarie lies Astride the Humbug, which is the inscrutable title of its local history.

Pastoralism

Between 1835 and 1858, however, a number of other settlers had opened up large pastoral runs in many parts of the region. In the Bland itself, to the south-west, the runs of Back Creek, Morangorell, Narraburrah and Carrumbee were all stocked with cattle in 1836; Abel Bourke in 1838 and Moses Beard in 1840 occupied opposing sides of Bland Creek; Euroka and its neighbour The Yellow Water Holes (owned for more than a century by the Nolans) started in 1838–39; and in the south Barmedman, owned by John Cartwright, had a resident manager by 1841.

These stations were all large, varying from 25,600 hectares at Bland, to 11,360 hectares at Back Creek. They were all vulnerable to drought and the protracted drought of 1849 to 1852 presented great problems. The description of the drought by an eyewitness (the future Mrs Denis Regan) is still powerful today:

> There were no springs to supplement to surface water so, to sink for water was useless. One by one the squatters went, but not until their own lives were in danger, and their stock died of thirst … What a scene of desolation it was! Only a few saddle horses remained, and these had been watered at the household tanks till they too gave out, and then the squatters and their families rode away, taking with them the last drops of water from their tanks. Birds died in thousands and dropped like berries from withered trees (Musgrave 1973:37).

The only squatter to remain in 1851 was Abel Bourke of Bland Creek and he survived only because of his accidental discovery of the only permanent spring in the district near Curraburrama homestead (a lasting boon to the region). The first squatters to return in 1852 were the 3 Regan brothers. In July, Denis married Sarah White (the first European child born at Young in 1830 and the author of the above quotation). They settled down at The Bland station, where Harriet Regan had died in 1844. Eighteen months later, in 1854, his brother William Regan married Sarah's sister Eliza and settled to manage Bland Creek next door. The 2 couples shared a single homestead at Bland for the next 6 years. John, the third Regan brother, 'a man who hated to have a boss' (Musgrave 1973:56), left the Bland to explore the area: he opened up 12,800 hectares at Merringreen in the Ungarie area and the Merool to the south-west. The properties which John Regan prospected were taken up in the years from 1853 to 1861 by new

pastoralists, such as Carlo Marino at Bolagamy and the African-American known as Black Sims at The Merool. Moses Beard, once at The Bland, moved out to Merool Creek station, the nephew of the explorer Hamilton Hume took up Mandamah West and William Marshall established the large station of Buddigower on Merool Creek.

All these properties lay within the Lachlan Pastoral District, set up in 1839 to control settlement between the Lachlan and the Murrumbidgee. The part of the central plain north of the Lachlan came within the Wellington Pastoral District. The largest stations of the north-west in the 1840s were Benjamin Boyd's 60,000 hectares centred on Condobolin, but these were broken up because of Boyd's financial difficulties after 1849. By 1849 there were some 50 runs with frontages to the Lachlan River in the 2 relevant Pastoral Districts. One of the most significant settlers was Thomas Kite, one of the original settlers in Bathurst in 1818, who in 1848 held Cobong and Burrawang to the north of the Lachlan and Wardry, Wallamundry and Bolamble to the south, totalling over 60,000 hectares.

The principal purpose of these early stations was raising cattle. An increasing amount of Victorian money was invested around the Lachlan plains and a route to market developed naturally southwards to the Murray and thence to Melbourne: the Lachlan plain did not, however, develop the strong Victorian affinities of the Riverina or the far South Coast, but remained ambiguously distant both from Sydney and from Melbourne. It was, however, a Riverina grazier, Augustus Morris, who made the first decisive step towards replacing the predominance of cattle by sheep on Burrawang and, to the west, Mulgutherie in 1861: although the Lachlan Pastoral District as a whole had had a ratio of sheep to cattle of almost 2:1 as early as 1839, the bulk of these sheep had been in the Murrumbidgee region to the south and in 1850 the large majority of Lachlan runs had had no sheep at all.

When Hanbury Clements settled at Eugowra, right on the eastern border of the plain, in 1857, he brought sheep with him from Bathurst and by 1878 there were 12,000 sheep on Eugowra. At Burrawang to the west, Morris' introduction of an initial 30,000 sheep in 1861 was even more significant and within 5 years Morris was grazing half a million sheep on his river frontages there. Other landholders followed suit and as a result the great wooden shearing sheds, which are today such a feature of the Lachlan, were constructed throughout the region: most of these sheds were originally built in the 1860s and 1870s and are highly significant evidence of the change in stocking practices in the mid-Victorian period. Thus the great shed at Burrawang dates from 1875; it originally contained 101 stands, later reduced with mechanisation to 88. Interest in quality of sheep stock was also evident: Thomas Edols, Morris' successor at Burrawang, bought 300 rams from Nicholas Bayley's famous Havilah stud near Mudgee and set up his own breeding program.

Similar developments took place in the extreme west of the region round Lake Cargelligo. This 'noble lake' which Oxley had admired in 1817 had become in the drier year of 1836 largely 'a plain covered with luxuriant grass', as described by Mitchell, but the water still supported mussels and the area was covered by black swans, pelicans and ducks. In 1841 Francis Oakes was licensed to run cattle on Gagelluga (i.e.

Cargelligo) and the following year Owen O'Neill took up Wooyeo: both runs had an estimated capacity of 1,200 cattle and 3 more runs were in existence by 1848. By this time the brothers Daniel and Sylvester O'Sullivan had become lessees of Cargelligo and by 1865 they had a dozen other runs in the west totalling 144,000 hectares. These runs, like those further east, also increasingly stocked sheep: in 1873 the new owners of Wooyeo commissioned the prominent Riverina builder William McFadzean to construct a woolshed. This woolshed was never completed for an entirely new element entered Cargelligo history while McFadzean was digging post holes.

Gold

This new element was gold. The Lake Cargelligo strike in 1873 was the fourth of 6 major goldrushes on the Lachlan plain between 1861 and 1894. Although the mineral wealth of the region is far less diverse and archaeologically significant than the concentration of mining sites on the Central Tableland, the gold discoveries in the Lachlan plain had rather greater significance in creating almost all the major towns of that area. The principal towns of the Central Tableland – Lithgow, Bathurst, Blayney, Cowra, Orange, Wellington, Mudgee, Rylstone – were not created primarily because of gold discoveries. By contrast Forbes, Grenfell, Parkes, Lake Cargelligo, Peak Hill, Wyalong and West Wyalong all owe their existence and early growth primarily to gold. Of the major towns of the Central Plain only Condobolin, Ungarie and Bogan Gate grew only out of the needs of farmers for a market and social centre.

The earliest gold rush was at Forbes, in 1861, starting on Thomas Rankin's Bugabigal station, now the site of Lachlan Vintage Village. Alluvial and reef mining began almost simultaneously, although water seepage into the short shafts dug into the gravel beds made alluvial mining particularly uncomfortable. Some 28,000 miners and their support staff were in a canvas town within months of the discovery. The usual stores, banks and even 2 theatres were thrown up quickly. The township of Forbes was born.

Although many miners went off to other finds just to the north, at Tichborne and Currajong (the future Parkes), the miners prospered for a time and the future of the town was assured by closer cultivation and a diversified use of the land, while renewed success in gold-winning from the 1890s until the First World War confirmed some of the original optimism of the miners.

As Forbes' first rush faded in 1866 a shepherd called Con O'Brien found gold on Brundah station. By January 1867, 5,000 people had established a mining community called successively Weddin Mountain, Emu Creek and Grenfell (after a gold commissioner recently murdered by bushrangers). During 1867 some 25,000 men were tempted to Grenfell, 56 dams were constructed for gold-washing and 26 reefs were exploited, most notably the Homeward Bound and the Lucknow. As at Forbes, alluvial gravels also tempted miners: these gravels still extend 20 metres below George Street in Grenfell today. Thirteen stamp batteries were erected, including 2 of 20 heads: the total capacity was 161 heads and 2 berdan pans. But, like most rushes, it did not last and actively declined after 1870. Between 1867 and 1871 production at Grenfell had been

the most impressive in the state, but from 1874 until 1882 it slackened and petered out by 1884.

Discoveries around Parkes had tempted away the more volatile miners. This area had developed gold fever slowly. The mines at Currajong, just north of modern Parkes, had opened in 1863 and 1864, including Bushmans and Dayspring, but the field was largely replaced by orchards and vineyards by 1867. It was only in 1871–72 that Thomas Hall Brogden's rich alluvial lead called Bushmans was profitably developed. The Welcome and the Tearaway produced large alluvial nuggets in 1872–73, Henry Parkes visited the incipient township of Bushmans and it was rechristened Parkes at the end of 1873. The opening of new mines in and around Parkes in 1874–75 confirmed the movement of miners away from Grenfell, deeper reefs were exploited at Bushmans in 1877, the Bonnie Dundee mine was a dazzling new success in 1878 and prosperity continued at old and new mines up to 1907. The improved cyanide processes used in the early twentieth century allowed some profit to be made as late as the First World War.

Outside Parkes, mines at Tichborne had some success in the 1870s and a town called McGuigan's had a dramatic butterfly life from March 1874 until March 1876: in March 1874 miners flocked from Grenfell and elsewhere to Peter McGuigan's gold strike. By June there were 10,000 people. In 1875 there were 9 stores in the new town's main street, a billiard saloon, a brewery, 8 hotels, a post-office and a photographer. In March 1876 the site of McGuigan's was deserted and every bark or slab hut had disappeared. McGuigan's is the classic fly-by-night gold town and its site (2 kilometres north-west of Tichborne) is likely to have archaeological potential.

Lake Cargelligo in the far west of the region had a rather more tangible success. Gold was found in the pine scrub near the lake in April 1873 by a burr-cutter's cook called Mrs Foster: Foster's reef preserved the memory of this observant lady for decades. Wooyeo station came to a standstill and William McFadzean, instead of erecting yet another woolshed, became for a time a principal prospector. By July there were only 200 people and 3 stores, but the field gained some momentum as the main shaft went deeper and deeper between 1874 and 1878. The 12-head stamp battery erected in 1875 began serious crushing in January 1877 when the shaft was 50 metres down. The 4 gold leases surveyed at Lake Cargelligo in 1878 produced an unremarkable amount and by 1884 gold production was over (although some abortive attempts were made again in 1903–04 and 1915–16). From 1873 until 1880 an area of some 54,400 hectares had been reserved from settlement as a goldfield. In 1880, since the gold was petering out, 12,000 of these hectares were made available for small settlers to take up 64- or 128-hectare blocks under conditional lease or purchase: the town of Lake Cargelligo, which had been from 1873 to 1880 'a mining centre surrounded by stock runs' (Figure 3) now became a well-established town surrounded by farms as well as runs.
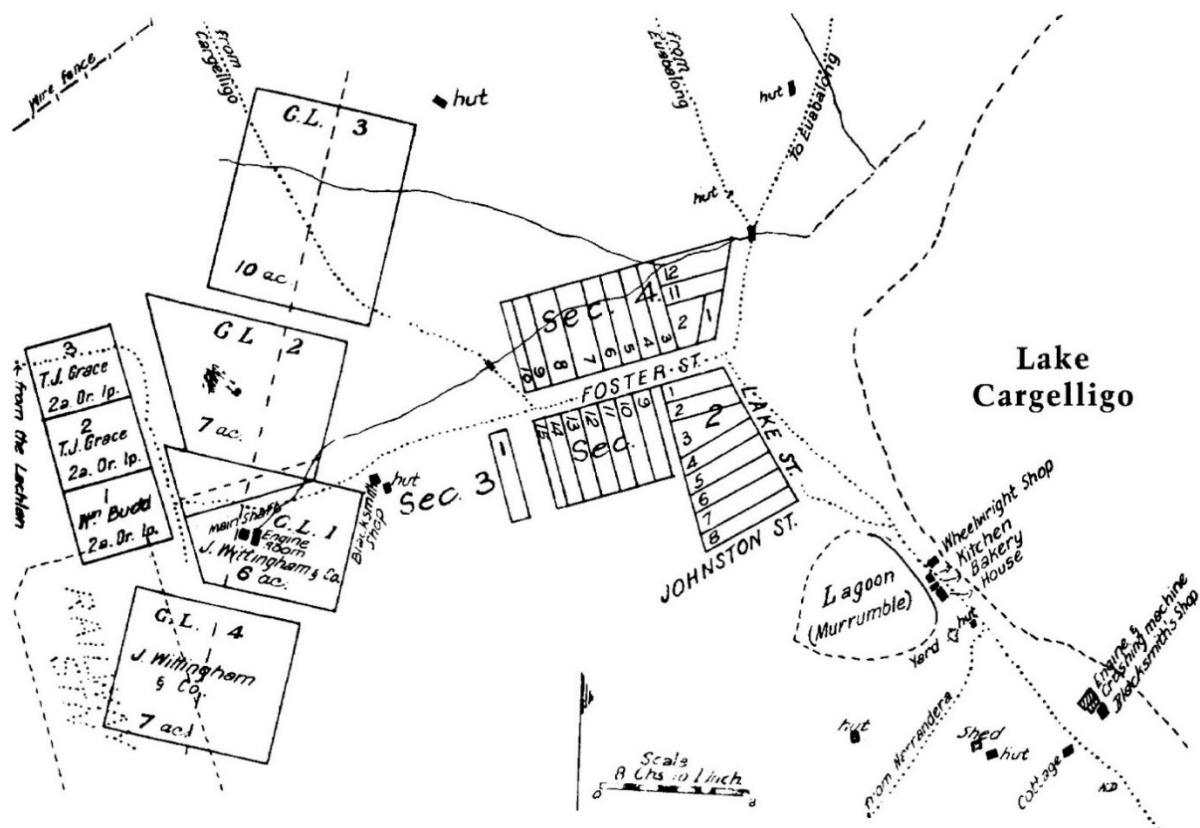
Figure 3   **The village plan of Lake Cargelligo in 1878 showing the 4 mining leases, GL 1 to GL 4. The site of the station after the railway came in 1917 is superimposed on the bottom left, cutting across GL 4. Note the stamp-battery down by the lake, together with a blacksmith's shop and a wheelwright's shop. The 7 huts, the house and the cottage marked have no relation to the planned village. Source: BT Dowd (1943)** *Lake Cargelligo: beginnings of district and village, Journal of the Royal Australian Historical Society*, **29:207**

Two more major gold strikes were still to be made. Peak Hill, in the north-east corner of the region, was an underpopulated area of large sheep runs in the 1870s and 1880s, inhabited largely by shepherds who had to protect their flocks from an unusual concentration of dingoes. Miners had come to the district immediately to the north (in the Darling Plains region) when gold was found at Tomingley in the mid-1880s. Four prospectors found payable gold on Peak Hill in July 1889 and a township promptly appeared straggling down the line of the lead in 'Struggle Street'. The town of Peak Hill was proclaimed on 30 November 1889, the Golden Hole was opened by the 7 'New Chums' the following September and 10,000 miners appeared from nowhere. Five new mines were opened and a 15-head stamp battery was brought from Tambaroora in 1891. The town grew rapidly: 77 children were attending the school in 1890 and the *Peak Hill Times* appeared in the same year. William Morris Hughes honed his political skills in the early 1890s as he pushed his wheelbarrow around, sharpening knives and mending umbrellas as the higgledy-piggledy township was rearranged into Euchie Street and Mingelo Street (Figure 4).
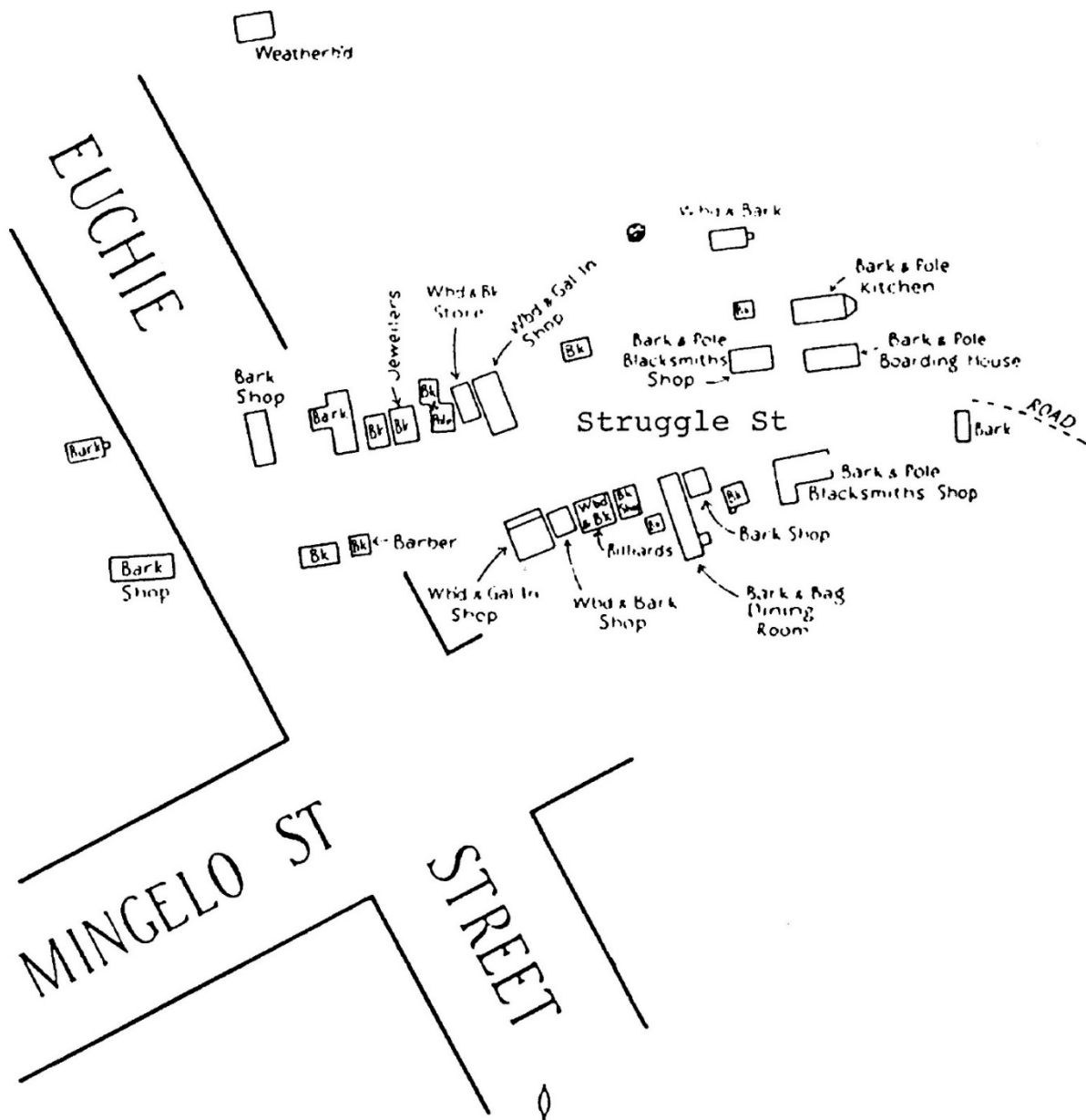
Figure 4   **Peak Hill Village in 1890showing the street plan proposed by the surveyor. Source: J Jackson (1939)** *Historical notes on the earliest days of Peak Hill and district,* **p 3**

The final flurry of gold came at Wyalong in 1893–94. An enterprising family called Neeld with experience on the Victorian goldfields and in sugar mill construction in Fiji had land around West Wyalong: Joseph Neeld found gold in 1893 and his father and 3 brothers developed claims on the best leads. The usual 10,000 miners were feverishly at work by March 1894 and established a township called Main Camp around the government water tank. The official township, however, was laid out by the surveyor 2.5 kilometres to the east in 1894 and named Wyalong. The new town had a school and post office by June 1894 and a Mechanics' Institute by 1895: it prospered and was declared a municipality in 1899. Meanwhile Main Camp, where the mining action was, was renamed West Wyalong, surveyed and straightened out in 1895.

The gold mines were exceedingly prosperous from 1895 until 1905, peaking in 1899 at almost 45,000 ounces. In 1900 they employed 1,900 men; but by 1905 there were only 462, and by 1910 a mere 150. The mining virtually ceased in 1920. Because of technical problems with sulphide ores, chlorination and cyanide plants were used from the 1890s onwards, which allowed the economic reworking of tailings.

Table 4   Relative significance of gold-producing towns from 1860s to 1910s

	1860s	1870s	1880s	1890s	1900s	1910s
Forbes	Moderate					
Grenfell	Major	Moderate				
Parkes	Minor	Critical	Major	Major	Major	Moderate
Lake Cargelligo		Moderate	Minor		Minor	Minor
Peak Hill				Major	Moderate	
Wyalong				Significant	Major	Minor

Closer settlement and the railway

The end of the gold rushes on the Lachlan Plain coincided with important changes in rural settlement and the exploitation of the land. The Land Act of 1884 had encouraged smaller units of mixed farming and the Homestead Selection Act of 1895 encouraged wheat growing. The twentieth century saw the transformation of a region that had been dominated by cattle, sheep and gold into an area characterised by wheat, wool and fat lambs served by new rail links and by substantial towns surviving the decay of mining which had been their initial stimulus.

In particular the effect of really close settlement after the First World War with soldier settlers a dominant theme was initially of mixed success, but as properties were consolidated into more economic sizes in the 1930s the region developed into a major sheep–wheat farming area.

The railway played an important role. Forbes and Parkes were linked to Sydney through Molong in 1893. The main southern line, however, bypassed the central plain, running from Cowra to Young and Cootamundra on its way to Melbourne.

Grenfell had to fight hard from 1894 until 1901 to have a branch line built to join the southern line at Koorawatha. Meanwhile the line from Parkes was extended first to Bogan Gate and then in 1898 to Condobolin. In 1903, Wyalong and West Wyalong (with a railway station built between the competing townships) were linked to Temora (and therefore to Griffith and Hay and indirectly to Melbourne). Lake Cargelligo was joined to this rail system in 1917 when a spur through Ungarie terminating at Cargelligo was completed. The line from Ungarie west to Naradhan was opened in 1929. These numerous rail links across the plain were further developed with a line from Wyalong

north to Lake Cowal and Burcher and a line west from Barmedman to Rankins Springs through Tallimba and Weethalle on the Western Highway.

All this made feasible the bulk transportation of wheat. The railway report of 1922 remarked that 'since construction of the Wyalong-Lake Cargelligo line in 1917, 11,000 acres (4,000 hectares) south of Ungarie have been divided into farms from 600 to 1,200 acres (2.40 to 480 hectares). Of these 9,000 acres (3,600 hectares) have been put under wheat' with a satisfactory average yield of 16 bushels to the acre. Barmedman station was reserved for soldier settlement and there was much closer settlement in the Wyalong area.

Agriculture

Around Parkes, in the former Goobang shire, more than a third of the shire had been cleared for agriculture by 1933. The area under wheat exceeded 120,000 hectares in 1930 and 1947–48, with fluctuations down to 84,000 in 1931 and 96,000 hectares in 1948. The yield, 20 or 23 bushels per acre, in Goobang shire was significantly higher than in the south and much higher than in the west. At Lake Cargelligo, the area under wheat was only 1,080 hectares in 1900. ln 1921, 4 years after the railway to Wyalong opened, the area under wheat rose to 6,400; the yield was often under 10 bushels an acre.

The extension of cereal agriculture had corollaries. Far more clearing was undertaken, mainly employing Chinese ringbarkers. Sheep, though an essential element in the wheat–sheep economy, declined in numbers because of the acreage turned over to wheat; cattle, never an unimportant sub-element, actually increased in number in many parts. Interest in the health of cattle was keen in the region because of John Alexander Gunn. Gunn was the manager at Yalgogrin, west of West Wyalong: at the homestead he set up a laboratory in the 1890s in which he prepared the first successful anthrax serum, produced commercially in collaboration with McGarvie Smith.

Wheat-growing encouraged the development of flour mills. Steam-mills, grinding with stones, had been ln the region since the mid-nineteenth century. Tom Cottome, writing from Grenfell to his brother-in-law in Bermuda in 1877, gave a very clear description of mixed farming at that time:

> Small farmers, men who take up two or three hundred acres, combine cereal growing, i.e. corn, wheat, oats & hay with the keeping a small flock of sheep. The sheep manure a considerable portion of the land by being judiciously camped & find the selector in meat & a decent little cheque once a year for the wool. He gets his wheat ground at the nearest mill & sells his produce at the nearest town (Butland 1971:77).

These small local mills were replaced in the 1890s and early 1900s by roller-machinery mills of higher output in centres such as Forbes, Parkes, Grenfell and Condobolin.

Agricultural shows became a feature of the principal centres, with local Pastoral, Agricultural and Horticultural societies: shows began at Forbes in 1872, at Grenfell in 1876, at Parkes in 1881, at Condobolin in 1885 and at Bogan Gate in 1907.

Forestry

The timber industry rather unexpectedly flourished despite all the enthusiasm for clearing land. The Department of Lands declared a whole series of timber reserves in the last twenty years of the nineteenth century, a time when natural regeneration of white cypress pine was quite exceptional. The reforestation of thousands of acres in the Ungarie district in the 1880s and 1890s led to state forests of cypress pine being declared between 1915 and 1922. In the first half of the twentieth century there is said to have been no comparable regeneration but in 1952 the climatic and other conditions were ideal and grazing land reverted to dense scrub. It has been suggested that this is not the natural vegetation, which seems to have been savannah woodland in the earlier eighteenth century, as on the foothills of the Weddin Mountains National Park. At Wyalong a very viable eucalyptus oil business flourished in the twentieth century, using blue mallee (grown in commercial plantation since the 1970s).

1930 onwards

The entire region shared the problems of the 1930s with the Depression hitting small farmers severely. The schools that had sprung up in the 1920s to cater for rapidly expanding families throughout the more densely settled region saw declining rolls: Wargambegal, for instance, a typical soldier settlement of the 1920s, opened its school in 1929 and reached a maximum of 36 pupils soon after; by 1944 it was closed. At Gubbata the 38 homesteads balloted in 1929 were reduced to only 7 farms by 1960.

The Rural Reconstruction Board founded in 1932 assisted in the painful adjustments of the Depression and the changes during the Second World War so that the farming community was better able to prosper in postwar conditions. The major agricultural machinery firm, Mitchell and Co. of Footscray in Victoria opened its NSW plant in Parkes in 1925, while the Small Arms Factory did for Parkes in the Second World War what a similar factory did for Lithgow in both wars. The Australian National Radio Telescope opened at Parkes in 1961. The routing of the standard gauge railway, from Sydney to Perth through Parkes and Condobolin in 1970, gave a further communications link, together with servicing work for Australian Railways.

Conclusion

Despite recurrent drought and flood, the Lachlan plain, with its great central waterway, provided economic and spiritual wellbeing for a large Aboriginal population. It has also provided sheep and cattle grazing for large European properties. In the last hundred years these have changed to combined agricultural and pastoral holdings of a more modest size. The area became criss-crossed with branch railway lines in the 40 years after 1893 and the wheat industry at last found a ready access to markets. Mineral wealth had been found sporadically, most notably at Grenfell in the 1860s, Parkes in the later century and at Peak Hill and Wyalong in the 1890s and early 1900s, but this phase was over by the First World War. The heritage of the region has many strengths: Wiradjuri sites of significance, early homesteads and fine woolsheds, mining sites of the

later nineteenth century and substantial country towns with their public amenities, important building stock and their railheads beside stockyards and wheat silos.

10. Southern Tablelands

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Undulating country differentiates the tableland from the highlands of the Blue Mountains and Monaro. Important entrance points are south-western corridor via Berrima, the Lachlan River valley to Cowra and the Michelago Pass to Monaro.

Topography is fairly uniform. Low rounded hills with occasional ridges with some flat land dominate in the centre of the region. Crookwell and Mulwaree Shires are almost entirely undulating country, as are Gunning and Yass shires with occasional ridges, while the south has more dissected upland country.

Vegetation is mainly open bushland and was attractive to early pastoral settlement. Box trees predominate, with stringybark on poor dissected uplands.

Grazing is the predominant activity, with sheep for fine wool being predominant. The Crookwell region has been notable for potato growing on soils derived from basalt. Wheat growing, which in the nineteenth century was important, is now insignificant. Timber getting and dairying have been important in the more rugged eastern fringes and gold was important from 1853 to the early 1900s at Braidwood.

Local government areas

Goulburn Mulwaree, Hilltops, Queanbeyan-Palerang Regional, Snowy Monaro Regional, (part of), Snowy Valleys (part of), Upper Lachlan, Yass Valley

Map 16   **Local government areas and boundaries of the Southern Tablelands historic region**

Aboriginal people

The high tableland with its open bushland and undulating country, dramatised on the east by the Shoalhaven gorges, offered food supplies less ample than did the coast. The principal groups of Aboriginal inhabitants, in the south the Ngarigo and Walbanga, in the north the Ngunnawal and Gandangara, were exclusively highland people and, while having their own associations with clearly defined areas, were more consistently nomadic than the Wandandian and the Wodi Wodi, who, although their area extended as far as Marulan and Charlewong on the tableland, were primarily coastal people. The tableland provided consistent vegetable nourishment for mobile people: the tubers of the yam daisy in spring, summer and autumn, wattleseed in July and August or orchid tubers in August and September. From September until May there was fish in the major rivers (including large Murray cod in the Murrumbidgee) while crayfish, yabbies and platypus abounded in most streams. ln July and August the moulting ducks on Lake

George could be captured easily. Meat from possums was in consistent supply and teams of hunters could capture the larger game. Fire was used to encourage the growth of grass to attract grazing animals: Sylvester Hunt describes the deliberate burning of the grassland around Lake George in 1820.

For the Aboriginal people of the south of this area, there was the annual pilgrimage to the adjacent high country of the Bogong Mountains (in Region 12) and the Snowy Mountains (in the ACT and Region 11). Here in December and January large numbers of men from various groups assembled at the higher granite tors to feast on roasted bogong moths, while the women and children remained in the valleys below. All this made for a mobile existence, following natural patterns, totally different from those followed by the European settlers.

These patterns were disrupted from the 1820s onwards by the increasing settlement of the tableland. Alexander Harris, 'the emigrant mechanic', was in the area of Bungonia sometime in the 1830s and reported that:

> the black says 'Plenty water before white man come, plenty pish (fish), plenty kangaroo, plenty 'possum, plenty everything: now all gone. Poor fellow now, black fellow'.

Some Aboriginal people did occasional work for the newcomers. At Arnprior, north of Braidwood, the Ryries had in the 1830s 'frequently employed aborigines but never more than twelve to fifteen at a time and only for two–three days continuance cutting bark, washing sheep and gathering potatoes. Some adults preferred to work, others to hunt. Their wandering habits seem to be guided by those with influence on the tribe.' In Braidwood itself Dr Wilson employed an Aboriginal man in his kitchens for 2 years but 'after receiving a new suit of clothes, he left the place at midnight and the next time I saw Mundilly he was (perhaps more becomingly) dressed as a savage chief; he evidently preferred a precarious existence, perfectly uncontrolled – to every comfort in a state of thralldom.'

But an independent existence was not to endure. Not only had the natural resource chain been disrupted, but exotic diseases decimated the Aboriginal population and the influenza epidemic of 1846–47 dramatically increased the death rate. The highland way of life had evolved over a very long period: Aboriginal camps at the Bogong Cave in the Australian Capital Territory (ACT) show that the specialised moth-eating was at least 8 centuries old when European people came to Australia. Within half a century of the first European settlement on the southern tableland the bogong moth ceremonies had totally ceased; the large intertribal meetings at various centres had ceased; the corroborees which early settlers witnessed in the 1830s and 1840s were unknown in the 1860s; the last 'king' of the Braidwood Aboriginal people died in the 1870s, his widow in 1900; Micallem, the chief in Araluen, survived to be photographed by Charles Kerry in 1890; 'queen' Nelly at Gundaroo, the last full-blood Aboriginal person in the area, died in 1897. But effectively Aboriginal traditional life had expired by 1850.

The new settlers

The exploration by Hamilton Hume, Charles Throsby, James Meehan and John Oxley from 1817 to 1820 made colonists aware of the potential of the southern tableland.

Throsby's enthusiasm about the area near Gundaroo and the Yass River knew no bounds: 'the finest country as ever was seen, admirably watered and a fine rich black soil fit for any purpose either for grazing or agriculture.'

As a result an increasing amount of land was settled in the course of the 1820s. In 1821 James Richard Styles' herds were in the vicinity of Reevesdale and Hamilton Hume himself had Collingwood near Gunning. Promises of future grants encouraged settlement: the earliest surviving homestead, Caarne at Bungonia, was built by Louis Huon de Kerilleau as early as 1826. And groups of Scots were well ensconced in the Braidwood area by 1830: the Ryries at Arnprior, George Galbraith at Nerriga, Duncan Mackellar Sr at Strathallan, Dr David Reid at Inverary and John Coghill at what became Bedervale. During the 1830s other Scots came to the area: William Scott at Manar, Colonel Mackenzie at Nerriga and Dr Thomas Braidwood Wilson at Braidwood Farm, the site of the future town. Taralga was settled by James Macarthur and his resident stockman Thomas Taylor in 1822, while Lachlan MacAlister founded Strathaird at Myrtleville in 1824.

The open country round Goulburn attracted early settlement. On the Breadalbane plain as early as 1821 there were 4,462 cattle and over 6,000 sheep: the first hectares of potatoes had been sown and some 13 hectares of barley. William Pitt Faithfull shouldered other settlers aside and created Springfield in 1828, where the surviving complex of 1840 and beyond reflects the success of the Faithfulls' merino stud.

The choicest land and the water frontages on the Yass, the Shoalhaven, the Cookbundoon, the Fish, the Wollondilly and many lesser streams were largely occupied by the 1830s, when occupancy was confirmed by a stream of land grants. An increasing number of proprietors became resident and market centres grew up along the major lines of communication coming south from Sydney. The key centre on the tableland was Goulburn, marked out as a town in 1828: this was Goulburn Plains (now North Goulburn) and the layout of the adjacent township of Goulburn to the south-west in 1832–33 created a substantial administrative centre for the future. In 1836 there was still only one small inn at North Goulburn, with a slab courthouse, some police huts and a lockup; and Goulburn to the south had only a 'few scattered buildings of brick', but by 1841 there were 655 people in the town, by 1845 almost twice as many, 1,200 people. More permanent houses, made of stone or brick, now outnumbered wooden houses by almost two to one. Goulburn did not lack early competition, however. In Baker's map of the county of Argyle (the north-east sector of this region) in the mid-1840s, there are inserted plans of 3 townships: one is Goulburn, the others are Bungonia and Marulan.

Marulan was on the main road south in any case: the surveyor-general, Thomas Mitchell, had the original Marulan (not the present township) laid out in 1834–35 on the junction where the south road divided, leading to Bungonia on the east or Goulburn on the west. Mitchell's intention had been to develop the Bungonia road, as a shorter route to Braidwood, but, as he complained in 1839, 'the bridges have been allowed to go to ruin, before the line of the road had ever been completed; consequently the township of Bungonia has been retarded' and Braidwood traffic had to take the long road round by

Goulburn. So Bungonia stagnated: between 1841 and 1846 its population rose only from 84 to 98, while Goulburn went from 655 to 1,200.

Between Marulan and Goulburn, Towrang Stockade was the headquarters for road-making gangs between 1833 and the mid-1840s. These gangs of at least 100 men constructed the main south road from Marulan to Goulburn in the years around 1840: the beautiful stone bridge over Towrang Creek received its keystone in 1839 and the ascendancy of Goulburn as the principal city of the plain was assured.

The stages to be expected in the development of country towns can be neatly summarised as: administrative and legal origins in a properly surveyed township; the provision of essential services such as an inn, a store and a smithy; the growth of settled population epitomised by resident ministers of religion and church buildings, instead of visiting clergy conducting services in private homes or barns; then the provision of educational facilities for an increasingly youthful population; the creation of community self-help organisations such as a school of arts or a debating society or an Oddfellows lodge; the hallmark of colonial success, the production of a local newspaper; the quintessential country town feature, the Pastoral, Agricultural and Horticultural Show; and finally the right to have a municipal council. These things may not happen in precisely this order, but they are convenient yardsticks for the transition from a police-magistrate's small settlement to a developed country town community.

Viewed in this light, the consolidation and dynamism of country towns in the tableland can be compared. Goulburn, founded in 1829 to 1833, became a major ecclesiastical centre: the Scots Church and manse were opened in 1841, the Anglican community grew so rapidly that Goulburn became the seat of a new bishopric in 1863 and the seat also for a Roman Catholic diocese in 1867. Facilities had grown rapidly in the young town: 5 stores and 5 inns in 1844, more than 20 hotels by 1867. The magnificent surviving industrial complex of Bradley's flour mill and brewery had been built between 1836 and 1845; by 1867 there was another steam mill and a steam tannery. Goulburn had become a municipality in 1859 and community improvement was represented by a masonic lodge, 2 Oddfellows' lodges and a Mechanics' Institute by 1867. The first newspaper (the *Herald*) had been established in 1848, the second (the *Argus*) in 1864, the third (the *Southern Morning Herald*) in 1868 and the fourth (the *Evening Post*) in 1870. One newspaper makes a town, 2 confirm it but 4 show a commanding regional eminence.

Bungonia, its old rival, was far outstripped. Although by 1839 it had 3 inns and an Anglican church, it did not have a public school until 1868, never achieved incorporation, never published a newspaper and remained a small focus for the fine properties around and, after 1889, for the tourist attraction of the limestone caves and gorge.

Nor did Marulan flourish. It was well sited originally on the south road and grew modestly. In 1847 it was described as 'a small cluster of houses with two inns, a post office and three or four stores' and an Anglican church was built in the same year. This wayside halt for travellers had respectable prospects, but everything went wrong in the 1860s. The railway to Goulburn bypassed the town and there was a drift away to the area around the railway station which opened in 1868 more than 2 kilometres away. The road to Braidwood was simultaneously not improved, so no advantage was derived from

that source. Over the next 20 years, the original township quietly decayed and became abandoned in the twentieth century, although the Catholic church remained in use until 1930. The final indignity was the building of the new freeway that bypasses new Marulan through the site of old Marulan. The growth of the town at Marulan railway station followed the usual pattern but without an administrative phase and beginning in the late 1860s: the Presbyterians built a fine church in 1873 followed by the Anglicans 5 years later. A school was opened in the new town in 1870 and the earlier school (founded in 1860) in Old Marulan finally closed in 1877. Simultaneous with the creation of the new town, the wealth of marble, lime and sandstone, which had been known and exploited since the 1830s, became a large business in the 1870s and a small industrial suburb, Marulan South, developed near the quarries in the 1920s. The main township did not grow much after 1900 and preserves in its ribbon main street, now freed of highway traffic, a very interesting new town of the last quarter of the nineteenth century. It makes a most valuable comparison with the 'historic village' of Bungendore, which has Turalla dating from the 1830s had 6 more houses by 1848, 2 hotels and 2 churches by 1867, a railway station in 1884 and a rabbit-freezing works that survives in part: unlike Marulan, Bungendore is dedicated to the arts and crafts and the ACT tourist market.

Braidwood, like Bungendore, has become very dependent on the crafts industry and on Canberra for its wellbeing in the 1980s and 1990s. The police magistrate (who was Duncan McKellar of Strathallan nearby) had a courthouse built in 1837, 2 years before the township was gazetted, 3 years before the first auction of urban allotments. An Anglican church was immediately planned, but the depression of the early 1840s stunted Braidwood's early growth. Most of the fine stone hotels, stores and other buildings which make Braidwood so outstanding a colonial town were built only after 1845. The process was sedate: population within Braidwood stayed fairly steady in the 1840s at around 200, the Anglican and Methodist churches were not built until the mid-1850s and the Presbyterian church only in 1861. The first school was opened in 1849. While the town was struggling to become more impressive, the gold rush of 1851 jolted the small rural community. The mining hopefuls stimulated bakeries, stores, flour mills, banks, hotels and the prosperity of the larger properties with fine wool, fat cattle and horse breeding stimulated the building of those 'boom-style' stores which are so characteristic of Wallace Street today. The local newspaper, the *Braidwood Despatch*, was founded in 1858 and survived as an independent paper until 1970: it had short-lived rivals, 2 opening in 1859, a third in 1862 and a fourth around 1867, but except for this brief period from 1859 to 1867 the area supported only the *Despatch*. The peak of the town's prosperity was reached at the end of the colonial period. Since then, it has quietly faded as the land became less profitable, communications remain a problem, there is no railway and Braidwood and surrounding district present a cultural landscape deeply nineteenth-century.

In the centre the region around Gunning and Gundaroo had rather a similar history, with development declining sharply after 1900. By 1838–39, when the surveyed town allotments were sold, Gunning was surrounded by some 30 grants of land, all of them sizable or made sizable through consolidation. The village had the usual facilities in the 1830s, such as a store in which John Kennedy Hume, the explorer's brother, was

murdered by bushrangers in 1840. It developed slowly over the 1850s and 1860s, with a school opened in 1858 and rebuilt for 56 children in 1872. After the railway came in 1875, offering a daily mixed passenger and goods service to Goulburn, the town continued to expand, with 6 hotels, several churches, the *Gunning Times* in 1887 and its Agricultural Show shortly afterwards.

Gundaroo like Marulan had 2 separate sites: the earlier, Upper Gundaroo in the early 1840s, with its hotel, church, school and post office, the later, the present Gundaroo, to the north in 1849. By this time all usable land in the area was occupied and the need for a service town was considerable. Upper Gundaroo did not fulfil this need by the 1860s, while its northern neighbour prospered. To an unusual extent Gundaroo's commercial and community life was dominated by one family, the Scottish Afflecks. From the 1850s for virtually a hundred years, William Affleck and his relatives were prominent storekeepers (at the surviving Caledonia Store rebuilt in 1880). In 1865 William had built the Royal Hotel also in Cook Street (now restored to active life). He contributed to the school in the 1860s, to the Oddfellows' Hall and to the creation of the recreation park. Despite an attractive new courthouse (now an Anglican church) built in 1876, despite the Elite Skating Rink of 1890, despite the Gundaroo Arcade of 1893, the second hotel (the Commercial, opposite the Caledonia Store) failed in 1896. The depression and the shearers' strike, coupled with the failure of the minor gold rush at nearby Bywong in 1895–96, made the 1890s a watershed in Gundaroo, as in many of the townships of the southern tableland.

Yass to the west, on the main road south from Goulburn to Albury, managed to survive into the twentieth century, like Goulburn itself, while its smaller neighbours stagnated. Gazetted in 1837, Yass had over 2,000 inhabitants and 315 houses within 10 years: by 1867 it had 4 banks, 7 insurance offices, 2 lodges, a Mechanics' Institute, 4 large hotels and the *Yass Courier* had been published since 1854. As at Goulburn, farmers diversified successfully into tobacco and fruit growing: there was a large area of wheat and the grazing properties around produced high quality wool. Yass was initially bypassed by the railway: the line extended from Gunning to Bowning in 1876 did not approach nearer than 5 kilometres to Yass town. But the construction of a spur line (the present Yass tramway) in 1892 allowed the transport of heavy goods from Yass to Yass Junction on the main line. The 1890s did not prove a climacteric for Yass. The creation of the new federal capital uncomfortably close in 1913 with its new railway in 1914 going not to Yass but to Queanbeyan, was followed by the decline of wheat-growing in the 1920s. Yass shared the tableland pattern of stability without growth in the twentieth century but was less directly affected by the 1890s than the smaller towns.

The northern towns, Crookwell, Binda, Laggan, Boorowra, developed later than Yass after an initial impetus from the Tuena gold rush of the early 1850s. Binda, which had been the administrative centre in 1850–51 when the township was laid out, did not develop, although its fine stone flour mill remained in use throughout the colonial period. Laggan, also with a surviving mill, did not achieve township status at all – and the future lay with Crookwell in the centre of the wheat-growing area of the 1860s and beyond. Although Crookwell was laid out in 1860, urban allotments were not sold until

1869 and the 'stirring little township' with its own Progress Association, brickworks and 2 flour mills in the 1880s, was poised to consolidate its position with the railway from Goulburn in 1901: the creation of the shire of Crookwell in 1906 was the final link in this chain.

Tourism

The antidote to stagnation for many centres on the tableland was tourism. The first area to organise tourism was Bungonia. The remarkable limestone gorges of the Shoalhaven River had been commented on as early as 1818, by Charles Throsby, and explored by Louis Huon de Kerilleau, who died there in 1829. Some of the dramatic Bungonia Caves had been partially explored in the 1820s: Allan Cunningham descended the Drum Cave in 1824, Thomas Mitchell the Grill in 1828 and the Drum in the following year. Governor Gipps visited the still unspoilt look-down in 1838 and visitors came sporadically: Eccleston du Faur to Hogans Hole in 1868–69. The Fossil Cave was first explored in 1872. The turning point came with the official opening of the caves and the appointment of a caretaker in 1889, with a cottage built in 1896–97. Records of attendance exist from 1891 to 1906, showing quite high interest, especially around 1900:

Table 5   Yearly visitor numbers at Bungonia Caves from 1891 to 1906

Year	Visitors
1891	95
1892	8
1893	57
1894	120
1895	302
1896	313
1897	627
1898	356
1899	559
1900	656
1901	401
1902	437
1903	397
1904	401
1905	314
1906	268

Despite the erosion of the view from the look-down by limestone quarrying and despite very severe threats indeed from the insatiable quarries since the Second World War, Bungonia Caves, gorge, township and early homesteads such as Caarne (1826), Inverary Park (1830s), Lumley Park (1830s), Glenrock (1840–1843) and Reevesdale (c. 1830), have enjoyed substantial success as a varied tourist attraction.

The caves at Wombeyan, east of Taralga, have been much better known and more visited in the twentieth century, but had a history of early exploration similar to Bungonia. The Grand Arch at Wombeyan was discovered by John Oxley in 1828, while recovering his horses, but the caves themselves were not entered by Europeans until 1842. The first caretaker was appointed in 1865, much earlier than at Bungonia (and 2 years before a keeper was appointed to Jenolan on the central tableland): more caves at Wombeyan were opened to the public every decade – Mulwaree in 1865, Kooringa in 1875, Wollondilly in 1885 and the Junction (discovered only in 1897) in 1906. A Caves House for visitors was opened in 1900 but burnt down in 1934: this tourist accommodation followed the construction of a road from Taralga in 1895 and one from Mittagong in 1900, but the crossing of the Wollondilly remained uncertain until a bridge was opened in 1967. Just as the Caves House immediately followed the original road in 1900, so the present caravan park (opened in 1972) was the logical result of the improved access from Mittagong.

Because of the limestone which abounds on the tableland there are numerous caves other than Bungonia and Wombeyan. The Grove Creek caves near Tuena in the far north had already attracted thousands of visitors by 1867: Bailliere's gazetteer describes how Grove Creek 'runs through the caves; its sublimity cannot be described by pen, nor can words eloquent enough express the grandeur of the scene which the eye alone can convey to the mind.' Such publicity brought even more visitors to the Tuena area in subsequent years to add to the graffiti 'and hieroglyphics in charcoal' which already adorned the caves.

Limestone caves were the key to tourism in the nineteenth century on the tableland. In the more recent past the well-preserved colonial townships have capitalised on their heritage appeal and on the leisure needs of the Australian Capital Territory to create a different sort of tourism.

Gundaroo, Bungendore and Braidwood have all exploited their heritage streetscapes in this way. All 3 have developed a distinctive reuse of old buildings for craft products: blacksmithing at Bungendore, weaving, pottery and art shows at Braidwood, art display and crafts at Gundaroo. The development of Canberra and the ACT had a restrictive effect on Yass but gave a new lease of fairly sophisticated life to Gundaroo, Bungendore and most of all to Braidwood. The emphasis on heritage has created also successful ventures such as the Pelican Sheep Station near Goulburn, the museum of historic engines at Goulburn's 1883 pumping station and the historic goldmining centre at Bywong. The very circumstances which made most of the southern tablelands stagnate economically and socially from the 1890s onwards have now become an asset which, if developed along sound principles, will continue to enhance the area.

Mining and industry

The southern tableland is much less generously endowed with mineral deposits than the central tableland, but gold, copper and iron, together with marble and other limestone deposits, have played an important role in the heritage character of the region.

In the far north, close to the Abercrombie River, there was recurrent goldmining at Tuena, with alluvial gold for at least 30 kilometres along Tuena Creek, first exploited in 1852. The Tuena field followed some of the mixed fortunes of the Trunkey area to the north of the Abercrombie, and many of the leases and shaft mines were abandoned by the 1870s. The field was very quiet in the 1880s: by 1891 there were only 80 alluvial gold-seekers, 10 of them Chinese, and 30 quartz miners. The later 1890s saw an increased output of gold and the reopening of known lodes, but despite consistent optimism and some capital investment in crushing machinery the Tuena mining community was reduced to a few fossickers by the First World War.

The more successful early goldfields were in the Braidwood area, at Jembaicumbene, Majors Creek and Araluen. With popular awareness of gold very high after the Ophir rush early in 1851, 200 men were panning at Araluen Valley in June 1851; high above on Bells Creek at Reidsdale similar alluvial finds were made in September and in October gold was found in Majors Creek to the north-west; further east gold was found in the Mongarlowe at Monga in 1852; by 1859 there were sufficient Chinese on the Jembaicumbene swamps south of Braidwood to construct their first joss-house. The 1860s saw quartz mining alongside large-scale alluvial mining and by 1871 there were 11 ore-crushing batteries in the Braidwood area. The very substantial difficulties in descending from the Bells Creek area into Araluen Valley and into parts of the Mongarlowe valley limited the development of the goldfields and has also preserved some important mining sites in out-of-the-way places.

In the 1870s alluvial mining became more mechanised, with water wheels, pumping mechanisms, long water-races, hydraulic mining with monitors scouring the landscape (as at Majors Creek) and ultimately in 1899 with dredges. The dredge transformed the mining industry in the twentieth century, mainly in the Araluen Valley and on the flats at Jembaicumbene: at least 11 dredges operated in the earlier twentieth century generating work for the iron foundry at North Araluen which turned to making dredge buckets. The last dredge, at nearby Glen Innes, ceased to operate only in the 1940s and 2 of the dredges still survive as bizarre shipwrecks on the Araluen landscape.

Conventional alluvial and shaft mining began at Bywong in 1894, with a tent-town of some 300 miners, sensitively recreated since 1981, along with a horse-whim. Original machinery, a battery handmade by Arthur Crouch for his children in 1902, and a full-size 3-head battery, also handmade by Arthur Shepherd in the 1940s, with its accessories constitute important testimony to this small but representative goldmine which was worked until 1964.

The Tuena district in the north had diverse mineral deposits: as well as gold, silver, copper and zinc which were exploited from the 1870s onwards. The Peelwood Copper mine, exploiting a complex ore body found in 1874, had erected 4 reverberatory

furnaces and was employing 500 men in 1875: the mine produced well for 4 years, and sporadically into the 1880s. The boom in silver in 1888 prompted the building of a water-jacket furnace to extract silver from the mixed lode, but the entire plant, for copper and silver, was dismantled in 1889 and did not reopen.

As Peelwood and other mines in the area declined, Captains Flat opened, also with complex ores, containing copper, lead, gold and silver. The ore-body had been prospected in 1874, like Peelwood, but mining began only in 1882 and was consolidated as the Lake George United Mining and Smelting Company. The smelters built in 1885 and 1889 were superseded in 1896–97 when English capital was brought in and 3 modern blast furnaces were built. The effective winning of gold, silver, copper and lead from difficult and poor ores aroused the admiration of TE Carne, the government geologist, but the effects of the pyritic smelting, the high sulphur content of the ore and the additional use of cyanide did enormous ecological damage up to the mine's closure in 1900 and again when the National Mining Corporation reopened it in 1926. The poisonous effluvium from the mine area today is a major problem for the local ecology and is the major heritage of the mineral industry on the tableland.

The other extractive industry which has left considerable marks on the landscape is limestone quarrying. These are the 'limestone plains': not only did limestone caves attract tourists to the Bungonia area but also the deposits of marble and lime attracted entrepreneurs. The marble to the north at Marulan had been worked since the 1830s: the quarry on the Wollondilly about 10 kilometres from Marulan is believed to have been the first of its sort in Australia and its marble was much in demand for early Victorian mantelpieces. The marble was overshadowed by other quarries later in the century but the more mundane limestone deposits between Marulan and Bungonia were developed commercially from 1875 onwards.

Local lime-burning was a significant industry in the 1880s and again, after a gap, from the First World War onwards: a number of ruined limekilns survive, though they do not seem to have been investigated archaeologically. From 1921 onwards really large operations began, first by Southern Portland Cement and Davis Gelatine Pty Ltd, then in the 1930s by Metropolitan Portland Cement who established a large cement plant near Picton to process the crushed limestone. The link with Hoskins Bros (later Australian Iron and Steel) at Lithgow and Port Kembla, where the ironworks had a huge appetite for limestone flux, culminated in the close association of BHP (the heir to AIS) and the Associated Portland Cement Manufacturers (Australia) Ltd which bought Metropolitan Portland Cement in 1960. The danger to Bungonia Gorge itself and to some of the cave systems provoked considerable public debate in the 1960s and 1970s when such protests were still uncommon. Already by 1960 the view from Bungonia look-down had been seriously vandalised by quarries: by 1972 quarrying dominated the view beyond the gorge.

The southern tableland has had much less mining activity than the central tableland but the effects on the environment at Captains Flat and Marulan–Bungonia have been far more public and serious than anything in Evans Shire save Sunny Corner (which, however, is much harder to visit than Captains Flat).

11. Monaro

The plateau has an undulated hilly surface for the most part, with some flat areas, averaging 1,000 metres above sea level. Streams occupy broad flat valleys but enter gorges when leaving the region: thus the Snowy River provides no routeway to the south except for past drovers. Near Dalgety and Adaminaby the plateau rises to form the Australian Alps, now mostly in the Kosciuszko National Park, which provides conservation and recreational facilities such as skiing and walking. The Snowy Range rises to 2,300 metres and forms a watershed between Snowy River and Murray River waters exploited for water storage and hydroelectricity. The effects of glacial action are visible around Mount Kosciuszko.

Outlets are via the Michelago corridor to the north, the Brown Mountain road to the south coast, and via Adaminaby and Kiandra to Tumut in the west. The plateau may then be said to be an isolated distinctive region.

The plateau's vegetation comprises forest (alpine ash in the east; peppermint, stringybark, box, cypress pine on the plateau); subalpine woodlands in the mountains; and extensive grassland, including kangaroo grass.

The whole of the upland plateau is used for sheep grazing, with beef cattle of secondary importance. Sheep are raised mainly for wool. Grazing on the high alps has now been stopped.

Local government areas

Snowy Monaro Regional, Queanbeyan-Palerang Regional (part of)

Map 17 **Local government areas and boundaries of the Monaro historic region**

The terrain

Monaro is high country and the eastern part is entirely alpine (Figure 11.1). The original European divisions of the area into the 3 counties of 1848, Beresford, Wallace and Wellesley, produced distinguishable geographical units (Figure 6).

County Wallace (which contained the present Snowy River shire plus a strip at the north along the Murrumbidgee) had all the alpine and subalpine country together with the valleys of the Snowy River and Wullwye Creek to the east and south. County Beresford, the present shire of Cooma-Monaro (which includes also the northern portion of county Wallace), lies between 1,000 and 1,600 metres, with lower tableland in the valleys of the Murrumbidgee and the Umaralla. The third county, Wellesley, equates with Bombala shire and is largely tableland between 500 and 1,000 metres. The only part of the entire region which lies below 500 metres is the southern stretch of the Snowy River valley near the Victorian border.

Aboriginal people

The Aboriginal inhabitants did not divide Monaro into subregions. Almost the entire area was occupied by the Ngarigo people. The only other groups in the present Monaro were the Walgal in the north-west corner around Kiandra and the Bidawal, who were basically a coastal people whose territory extended inland through the south-east part of Bombala shire, south of Bombala, with the Snowy River as their northern border and Currawong Creek as their western. As in the southern tableland and the eastern Murray region, this high country offered significantly less ample food supplies than the coast. The Bidawal had both coast and tableland: the Ngarigo were entirely highland people and so were consistently more nomadic.

The high country was not inhospitable if treated with respect and understanding. If the Ngarigo explanation that 'Monaro' meant a woman's breasts was correctly understood by the early Europeans, then the Aboriginal perception of their highland home was not of rugged peaks but of undulating hills, offering comfort and nourishment. The tableland provided consistent vegetable food for mobile people: there were the tubers of the yam daisy in spring, summer and autumn, wattleseed in July and August or orchid tubers in August and September. From September until May there was fish in the major rivers (including large Murray cod in the Murrumbidgee), while crayfish, yabbies and platypus abounded in most streams. Meat from possums was in constant supply and teams of hunters could capture the larger game.

There was the annual pilgrimage to the alpine country of the Bogong Mountains (in region 12) and the Snowy Mountains. Here in December and January large numbers of men from various groups, not only from Monaro, assembled at the higher granite tors to feast on roasted bogong moths, while the women and children remained in the valleys below. All this made for a mobile existence, following natural patterns, totally different from those followed by the European settlers.

These patterns were disrupted from 1827 onwards, when Richard Brooks first grazed his animals on Gegedzerick, just north-east of Berridale. By 1836 the major runs of the

colonial period were all occupied by Europeans. Exotic diseases, particularly syphilis and influenza, had a disastrous effect on the Aboriginal population. John Lhotsky, the observant Polish biologist, noted in 1834 that the Monaro group 'is already very weak, consisting of about 50 men; they are entirely tame (indeed not civilised but corrupted)' (Lhotsky 1835 cited in Hancock 1972:67). The 'tame' ones might serve as guides, most memorably Charley Tara who served Strzelecki well at Kosciuszko in 1840, and probably some Aboriginal people worked sporadically on stations as they did on the southern tableland and in the Tumut area. The *Sydney Morning Herald* might report in 1856 that the Monaro Aboriginal people were almost extinct, but the census showed 166 Aboriginal people (probably Ngarigo) around Cooma and 319 (probably mostly Bidawal) around Bombala.

Still in 1867 Aboriginal people were receiving government blankets in Cooma and in 1872 Alfred McFarland met a group of about 30 Aboriginal people 'of every age', lying on possum rugs, roasting possum and koalas while an old man whittled a boomerang. This group was camped west of Cambalong, where the Bombala and Delegate rivers unite (McFarland 1872). These may not have been either Ngarigo or Bidawal, since Aboriginal people from Gippsland and Omeo are known to have been in Monaro, usually as stockmen, in the 1850s. But Bony Jack and his son Biggenhook were certainly Ngarigo and Biggenhook lived on into the twentieth century, one of the most dedicated supporters of the Cooma Cricket Club. When Biggenhook died, however, aged about 60, in 1914 the Ngarigo people became extinct.

European settlement

The pressure for grazing land on the tablelands took herds and flocks well beyond the 'limits of location' in the 1820s. By 1827 Richard Brooks had established himself on Gegedzerick, north-east of Berridale; in 1828 Wambrook, north-west of Cooma, was occupied and by 1830 William Woodhouse had opened up Inchbyra on the Snowy River in the far south. By the late 1830s virtually the whole region was taken up with squatting runs. The only areas left unoccupied were: the alpine area along the western boundary; the triangle of land north of the great loop of the Murrumbidgee (the area around Shannons Flat); and the southern portion of what is now Kosciuszko National Park on the Victorian border.

The occupied land was suitable both for cattle and sheep. The 15,000 hectares of Brooks' Gegedzerick carried 5,000 sheep and 6,000 cattle in 1833; in 1848 Thomas Bloomfield ran 13,000 sheep on 14,000 hectares at Coolamatong on the Snowy River. A speculator like Benjamin Boyd was encouraged to acquire 14 runs totalling over 24,000 hectares in the 1840s. Many squatters, like Farquhar McKenzie of Kerrisdale, moved on to Victoria. Some, like Ben Boyd, went bankrupt. But others, like the Woodhouses, continued to have a stake in Monaro.

When the list of lessees and runs in the Monaro Pastoral District was gazetted from 1848 to 1850 following the squatting legislation of the mid-1840s, it showed a total of 172 runs. The Pastoral District was more extensive than the present Monaro: when south coast runs are removed from the 1848 to 1850 lists, there are 130 runs in Monaro, as

shown on the accompanying map (Figure 7). There were 57 properties on which only cattle grazed, 28 with only sheep and 44 with both cattle and sheep. The other run (John Lambie's at Cooma) was dedicated to horses: as the herds of brumbies increased, horses become an important element in the economy and folklore. There were many men from Snowy River.

Transhumance

From the 1860s onwards the potential of alpine grazing in summer had been realised. Until 1957 the practice of transhumance grazing, moving stock up to the highest country in the Snowy Mountains in summer and driving them back into the valleys in the autumn, was practised on a familiar European model. It was the newcomers' equivalent of the bogong moth migration of the Aboriginal people.

Droughts or very heavy snowfalls might restrict the period of high grazing in individual years. Early attempts at creating permanent stock stations at high altitudes had run into recurrent difficulties. In 1839, for example, Dr Gibson's cattle perished near Kiandra on Gibsons Plains through severe weather and in 1835 300 head of Palmer's cattle were smothered by snow in the same area. Palmer and Gibson were not practising transhumance: they were suffering the effects of the alpine winter. There was still no transhumance in 1840, when Stewart Ryrie, a member of the pioneering family at Arnprior near Braidwood, who had come south with stock, commented that there were no cattle or sheep taking advantage of the good pastures which he explored above the tree line in summer. Still in 1855 WA Broadribb commented that none of the high grazing north of Jindabyne was occupied at any time of the year.

The real emergence of transhumance was a direct result of the land legislation of the 1860s which subdivided so many of the larger runs in Monaro as elsewhere. The smaller selections which were created in a complex pattern of division and partial reconsolidation over the following decades made many graziers more susceptible to drought conditions than the huge undivided runs had been in the 1840s and 1850s.

The first major instance of transhumance seems to have been from one of these old, still undivided runs in 1865. The manager of the Cooma section of William Bradley's huge holdings drove 48,000 sheep and 2,000 cattle into the mountains to the west during the summer drought in 1865. This very practical expedient became a commonplace from the late 1860s onwards, despite recurrent losses when winter came to the high country unexpectedly early as in 1871.

One significant corollary of the introduction of alpine grazing as a supplement to the established tableland station was a marked increase in carrying capacity. As Sir Keith Hancock noted from the unpublished station records of Bibbenluke (just north of Bombala), 'by the late 1880s H.T. Edwards had lifted Bibbenluke to a carrying capacity of one sheep to the acre: but he would have been unable to do so had he not lightened the pressure on his paddocks by sending 10,000 to 20,000 sheep every summer into the Kiandra country' (Hancock 1972:135). All this high grazing was uncontrolled until the first government snow leases were introduced after the Crown Lands (Amendment) Act of 1889. ln 1893 there were 22 such snow leases, by 1921 61, covering some 100,000

hectares, which had tripled by 1943. Despite government restrictions, which were flexible to reduce grazing when the alpine pastures were in poor condition or under snowdrifts, the deterioration of the vulnerable environment of the high country was finally recognised in 1957, 13 years after the Kosciusko State Park Act, by the abolition of snow leases. The movement of cattle and sheep into the snow leases from the late 1940s up to 1956 had been monitored and show a very high concentration in the north-east sector of the park with sheep varying in number between 105,000 and 168,000 each year and between 5,600 and 13,600 cattle.

The attached maps (Figure 8) show the distribution of cattle and sheep within the State Park in 1954–55 and the lines of the principal stock routes for sheep both for the Monaro properties and for those in areas to the west and north-west. The stock routes for cattle followed the same pattern in the mountain, but cattle unlike sheep were herded right to the top of Mount Kosciuszko and down through the Thredbo area. These well-trodden stock routes and the stockmen's huts are important heritage items as tangible evidence, beyond the general degradation of an alpine environment, of the most significant use of transhumance in Australian history.

The 60 stockmen's huts which survive have been the object of National Parks and Wildlife Service (NPWS) policy debate. These 'simple one-roomed structures with a fireplace hung with an assortment of chains and billies, a bed made of sacking and saplings, sometimes a window and often with a dirt floor' (Huenecke 1979:3) were constructed of slabs or logs or weatherboard. They are in general earlier than the corrugated iron huts built in the 1930s and 1940s when grazing properties had again become smaller and even more dependent on intensive use of the alpine pastures in summer; this need coincided with legislative changes that made payment for a snow lease much more inviting in the 1920s and beyond. The abolition of snow leases in 1957 did not end alpine grazing: that had to wait until the government's acceptance of the Edgar Report in 1969, when grazing within the Kosciuszko National Park was totally prohibited, while at the same time developing leisure uses of the high country.

One hundred years of grazing both on one's own run and on the common pastures of the alps created an important wool, mutton and beef industry in the Monaro. There was also some dairying: butter factories became quite common in the 1890s and production remained high up to 1905, peaking again in the early 1920s before dwindling decisively. The Monaro was not suited to intensive dairying and the lifeblood of the region remained wool and meat. Its prosperity therefore fluctuated with the prices of these 2 staples and was much bound up also with the vagaries of drought, flood and snow. Although the graziers (and all those whose livelihoods depended on the graziers) had some difficult times, in the slump of the 1840s, in the drought and low wool prices of the mid-1880s, in the crash of the early 1890s, the drought which ruined so many countryfolk in the late 1890s did not affect the Monaro and the rabbits were less successful there than in the districts of the west.

Agriculture

Like almost all country districts, Monaro had been obliged to grow wheat for its basic flour supply from the very beginning. As a matter of basic subsistence the hand-operated steel mill ground wheat into flour on many of the 130 early runs. The first water-powered flour mill was built at Jindabyne by Stewart Ryrie as early as 1847 and 3 others opened in the region in 1853: these all failed and only one horse mill at Bombala was entered in the 1854 and 1855 returns. But commercial milling soon revived with a similar development in Cooma in the following year. A second steam mill opened in Cooma in 1865 and a second water mill in Bombala in 1869. The Bombala district maintained at least 2 mills and the Cooma district 4 for over 20 years. But, as Alfred McFarland noted in 1872, 'scarcely any man in [Monaro] could live by agriculture alone; the country stands too high and the climate is too dry' (McFarland 1872:117).

In 1871 just over 1,700 hectares around Cooma and 540 around Bombala were under crop (mostly wheat, with some oats, a little barley and a useful crop of potatoes). At its peak of agrarian optimism in the early 1880s, the region had 8 steam mills and 3 water mills in the expectation that the projected rail link with Goulburn would provide wider markets for Monaro flour. But the drought of 1885 to 1887 curtailed grain production and the railway in 1889 brought less expensive wheat from the Murrumbidgee region instead of opening up lucrative Sydney markets for the Monaro farmers. Wheat acreage declined in the 1890s and, despite a sharp upsurge in the first decade of the new century, steadily diminished until, after 1920, it was of negligible importance. It is ironic that one of the most striking industrial monuments in the Monaro is the stone windmill tower at Nimmitabel built by a German settler between 1865 and 1872 to grind grain but never used because of local fears that the sails would frighten horses: after a few years as a horse-driven timber mill, the building became derelict in 1885. Geldmacher's mill at Nimmitabel is telling evidence of an industry which could not succeed.

Homesteads, towns, churches

The relative success of the graziers is enshrined in their homesteads, outbuildings and outstations. All these homesteads were single-storeyed: McFarland commented in 1872 that there was only one staircase in all the country properties of Monaro (McFarland 1872).

The towns themselves grew up as natural service points for the graziers. Bombala was the most successful early centre, with over 100 residents by the mid-1850s. Cooma only gradually reached its position of ascendancy in the region: it started as an inn strategically sited on James Kirwan's run at the intersection of rudimentary roads to Goulburn, Coolringdon station, Mittagong and Queanbeyan. It was a convenient centre for the administration of crown lands in the 1840s by Commissioner Lambie who took up some of Kirwan's run. The village of Cooma was gazetted in 1849 and the first town allotments were sold in the following year. The usual stores and other services followed in the 1850s, with a hospital and a court. It rapidly reached parity with Bombala and the first newspaper in the region, the *Manaro Mercury and Cooma and Bombala Advertiser,* was published in Cooma in 1860. The 2 Bombala newspapers did not start until 1863 and

both of them emphasised the connection with the south coast: the wool clip from Bombala went by bullock team to Merimbula for shipment to Sydney, whereas the Cooma wool went to Goulburn for railing to Sydney. When the Monaro's rail link to Goulburn was opened in 1889, it ended at Cooma: the line was not extended to Bombala until the 1920s and the ascendancy of Cooma was assured.

One prominent feature shared by the rural and urban parts of Monaro was building in stone. There is excellent granite in the region, red granite quarries near Cooma, at Jindabyne and on Maffra station and a quarry for dark grey granite on the Berridale road south of Cooma. Partly because of acute transport difficulties, these granite outcrops were not exploited like those at Moruya on the south coast, but they were used extensively for local domestic and public buildings. In particular the stone churches of Monaro demonstrate the character of religion in the lives of the settlers.

The earliest stone church is Christ Church at Cooma, built in 1845–46; the next was begun in 1849 as a private chapel on Richard Brooks' Gegedzerick. St Mary Virgin at Gegedzerick is a particularly interesting instance of grazier aspirations, since Brooks had already built the exquisite Gothic chapel still standing at Denham Court near Campbelltown in the Sydney region. The Presbyterian church on Round Plain (north-west of Berridale), built in 1870, is the most uncompromising isolated church in the Monaro, dourly Scottish on the high, level grazing land. But it is the whole series of 19 stone churches, 5 Catholic, 9 Anglican and 5 Presbyterian, built between 1845 and 1910 which demonstrate the interrelationship between people, their faith and the geology of their land (Figure 9).

Mining: gold and copper

Stockmen on the mountains in the 1850s occasionally found some gold and did some rather casual digging. The regular presence of gold from decomposed granite in the Snowy and Eucumbene rivers was confirmed by the geologist WB Clarke in 1852. This news got around in a very gold-conscious decade and in the mid-1850s 'a few parties of regular diggers of the more enterprising sort, those who prefer remote, quiet, and moderately paying diggings – a large proportion of whom are Americans – have prospected and partly worked the southern part of Maneero, where the many beds of the Snowy River rise; and I have known of a party who have worked continuously for 2 years on the Delegate River country' (*The Age* 1860 cited in Moye 1959:4–5).

The main gold deposit at Kiandra, however, was not found until November 1859. By January 1860 more than 1,500 miners had reached Kiandra, one man for each metre above sea level, for this is the highest gold area in Australia. By April there were 10,000 on the field. The nearest station was William Russell's Denison on the Eucumbene River south of the new goldfield and Russell at once opened the Digger's Rest Inn and did a brisk trade in beef and mutton. The 2 crossings of the Eucumbene River between Denison and Kiandra were hazardous and the track was extremely boggy, but improvements were rapidly made and Kiandra developed the usual goldfield facilities before the end of 1860. The *Alpine Pioneer and Kiandra Advertiser* first appeared in

August 1860. But the rush was transient and the spectacular nuggets from Surface Hill and the Jackass Flat beside the township had all been found by December 1860.

This early phase, the real goldrush period between 1859 and 1861 was dominated by surface sluicing: this continued on a much-reduced scale into the 1870s and some attempts at reef mining were undertaken, particularly on New Chum Hill, but in the late 1870s only some Chinese miners were active. The year 1883 saw the introduction of large-scale hydraulic sluicing, using long races from the Three-Mile Dam (built in 1881) and American-style monitors: between 1883 and 1886 the deep leads in New Chum Hill were exploited, leaving the great scars in the hill still so evident today. From time to time work resumed on these leads but this form of mining had peaked by the late 1890s.

In the early twentieth century, from 1900 to 1903, dredging on the Gungarlin, Snowy and Eucumbene rivers was undertaken with some success, but the last of the dredges was taken away to Tumbarumba in 1904. Thereafter there was a long period of small-scale mining in the Kiandra area; the last abortive effort of note was again at New Chum Hill in 1937.

The outstanding features of the mining sites around Kiandra are the stark remains of hydraulic erosion, along with dams and water channels.

In the various other diggings south and north of Kiandra, a rather similar sequence of mining modes has left various significant traces: riverbed sluicing at Four Mile (with a slab and kerosene tin hut of the 1930s); creek flat sluicing on a grand scale, a huge sluice hole and foundations of houses and stores at Nine Mile; the Broken Dam at South Bloomfield; and the scatter of machinery at the Elaine Mine on Bloomfield Creek dating from 1926 to 1938.

As Dr Pearson has commented, these high diggings are of rare significance. 'They represent an unusual mining regime in Australia, one where heavy snowfalls meant abandoning mining or modifying methods for many months each year. Also unusual in this state is the combination of ground sluicing, hydraulic sluicing and tunnelling methods (Pearson 1979). Since the entire Kiandra mining area has been within a national park for more than 40 years, it has preserved its 1930s aspect, to a degree not known among any but the most isolated mining sites in New South Wales.

The only other mining of any importance was for copper. In Snowy River shire copper was found at Kyloe in 1860, at Gegedzerick and Cootralanta in 1872. At Cootralanta Solomon's mine produced quite a lot of ore, which Solomon hoped to smelt on the spot: to fuel the projected smelters, coal leases at Wambrook (north-west of Cooma) were opened, but this was a short-lived venture. Cootralanta was reopened in 1906 but without dramatic results. Gegedzerick, where shafts were sunk in 1872, was reopened in 1907, while Kyloe had shafts dug in 1872, and extended in 1882 and from 1904 to 1907. A Krupp ball mill was constructed at Kyloe in 1907 but the mine closed in 1914.

In the Bombala area, copper had been found by WB Clarke in 1852 and the Belmore Freehold Silver and Lead Mining Co did extensive prospecting on these copper ores at Quidong from 1868 onwards. Silver-lead ores were smelted here on the Delegate River

in the 1880s and the area has archaeological potential, but its economic promise remained unfulfilled.

Tourism

The snow country has made Snowy River shire one of the tourist meccas of Australia. Skiing was introduced first at Kiandra. The first winter for the miners in 1860 saw sledges being built but only in 1861 were skis improvised, 'constructed of two palings turned up at the front and about four feet long, with straps to put the feet in, and the traveller carries a long stick to balance himself and to assist him up the hill' (SMH 1861 cited in Moye 1959). These were the first skis seen in Australia and the younger miners used them simply for relaxation. Races seem to have been organised in the late 1860s or early 1870s, and the Kiandra Snow-Shoe [i.e. ski] Club was founded in 1870. This was one of the earliest ski clubs outside Europe and 2 years before the first American club.

The period from 1895 to 1905 is uncommonly well recorded because Charles Kerry, the leading Sydney photographer, who was born in Monaro, was a skiing enthusiast and took many remarkable photographs of this early phase in the sport's development.

The alps became more regularly the venue for winter sports. The Alpine Club of New South Wales met at Kiandra in 1906 and 1907 and the opening of the Hotel Kosciusko in 1909 gave a much-needed base for the future extension of mountain tourism. Skiing developed only slowly, however, until the 1930s, when Austrian ski instructors came to Australia and when the first ski-tow was erected at Charlotte Pass. The road from the coast to Wagga Wagga via Cooma and Kiandra had been upgraded as a state highway in 1928, but the real advances came in the 1950s when the demands of the Snowy Mountains Scheme improved the highway and opened up access roads in the southern part of the park, including the Alpine Way. As a result Thredbo developed as a ski-resort in the 1950s, ski lodges opened in various places and the first chairlift was installed in 1957. The Thredbo Cup for slalom and giant slalom has become an international event since 1964.

Since the 1960s, therefore, the Monaro section of the alps has become a major centre for winter sports, there has been a great deal of investment and a strong international element has been present in the exploitation of the snowfields.

Fishing

The lack of trout in the mountain streams seemed very regrettable to nineteenth-century Europeans. The first trout were put into Monaro rivers in 1884 and concentrated efforts to stock the Snowy River with annual offerings of trout fry over the 15 years after 1888 were highly successful. As a result, trout-fishing in Monaro became a very satisfying pursuit, not least for the new inhabitants of Canberra prepared to venture beyond the Cotter River. To those such as Sir Keith Hancock, an acquaintance with the high country was simply incomplete without a rod in hand.

The rearing of trout on a commercial scale began in the very early twentieth century close to the Hotel Kosciusko, but this Diggers Creek hatchery was not a great success. The next hatchery, on the Thredbo River, operated by Jim McGregor, lasted up to the

Second World War, and its 4 concrete pounds for stud fish were still there in 1960 in secure overgrown neglect. The Gaden Hatchery, Trout Rearing and Research Station, also on the Thredbo River, at Paddys Corner took the dominant commercial and research position after 1953.

The Snowy Mountains Scheme

The immense modification of the environment wrought by the Snowy Mountains Scheme was undertaken to supply electricity to much of south-east Australia and to regulate water supplies in the Murray and Murrumbidgee regions. The untapped resources of the snowfield and its major river, the Snowy, had been recognised in the colonial period. In 1884 the Surveyor-General of New South Wales floated the idea before the Royal Commission on the Conservation of Water that the Snowy River might be diverted northwards to the Murrumbidgee through the gap now occupied by Cooma airport and that Lake George might become a reservoir.

The political interest in independent statehood for the Riverina focused some attention on the alpine catchment in the 1930s and the diversion of the Snowy River was again actively debated in 1938 when Burrinjuck Dam was unable to supply enough water to the Murrumbidgee Irrigation Area.

The catalyst which turned all this into reality was power shortage during the Second World War. After a detailed study of the hydro-electric potential of the alpine rivers from 1942 to 1944, the Chifley government passed the Snowy Mountains Hydro Electric Power Act in 1949 and the Act was implemented to the full under Menzies. When Tumut Ponds Dam was opened in 1958, Menzies characteristically, and only too correctly, reminded the country that 'this scheme is teaching us and everybody in Australia to think in a big way, to be thankful for big things, to be proud of big enterprises and to be thankful for big men' (Wigmore 1968:93).

In the years before Lake Jindabyne and Lake Eucumbene in Monaro and the other new lakes in Tumut shire had filled, the Snowy Mountains Authority had done immense damage. To an extent it also repaired a great deal of this damage, for the dams could not be allowed to fill with eroding silt from the scarred landscape and therefore soil conservation after construction works was an essential priority for the authority. So the mountains survived the onslaught of Sir William Hudson, his 9 hydro-electric stations, his tunnelling and his road-building. The cost of the scheme may or may not have been economically justified: there is argument over the cost advantages of water-generated electricity and scepticism over the cost-effectiveness of the benefits to irrigation. There is no doubt, however, about the way in which the scheme caught the popular imagination and interested the international engineering world. At the expenditure of $820 million between 1949 and 1973, the scheme succeeded in diverting the Snowy River and the Eucumbene to supplement the flow of the Murray and the Murrumbidgee; it provides electricity for the central grid of New South Wales, the ACT and Victoria; and it gave a major boost to the confidence and profits of the engineering and construction industries in Australia. It was the supreme achievement of the development lobby and it has left a long, long shadow over Australian attitudes.

On the local level, the establishment of the authority's headquarters at Cooma has brought growth and prosperity to the town. But it has also drowned Old Adaminaby, which was re-erected on its present site in 1956–1957; it left the bed of the Snowy River virtually empty below Island Bend; and Lake Eucumbene swallowed up the mines of Kyloe.
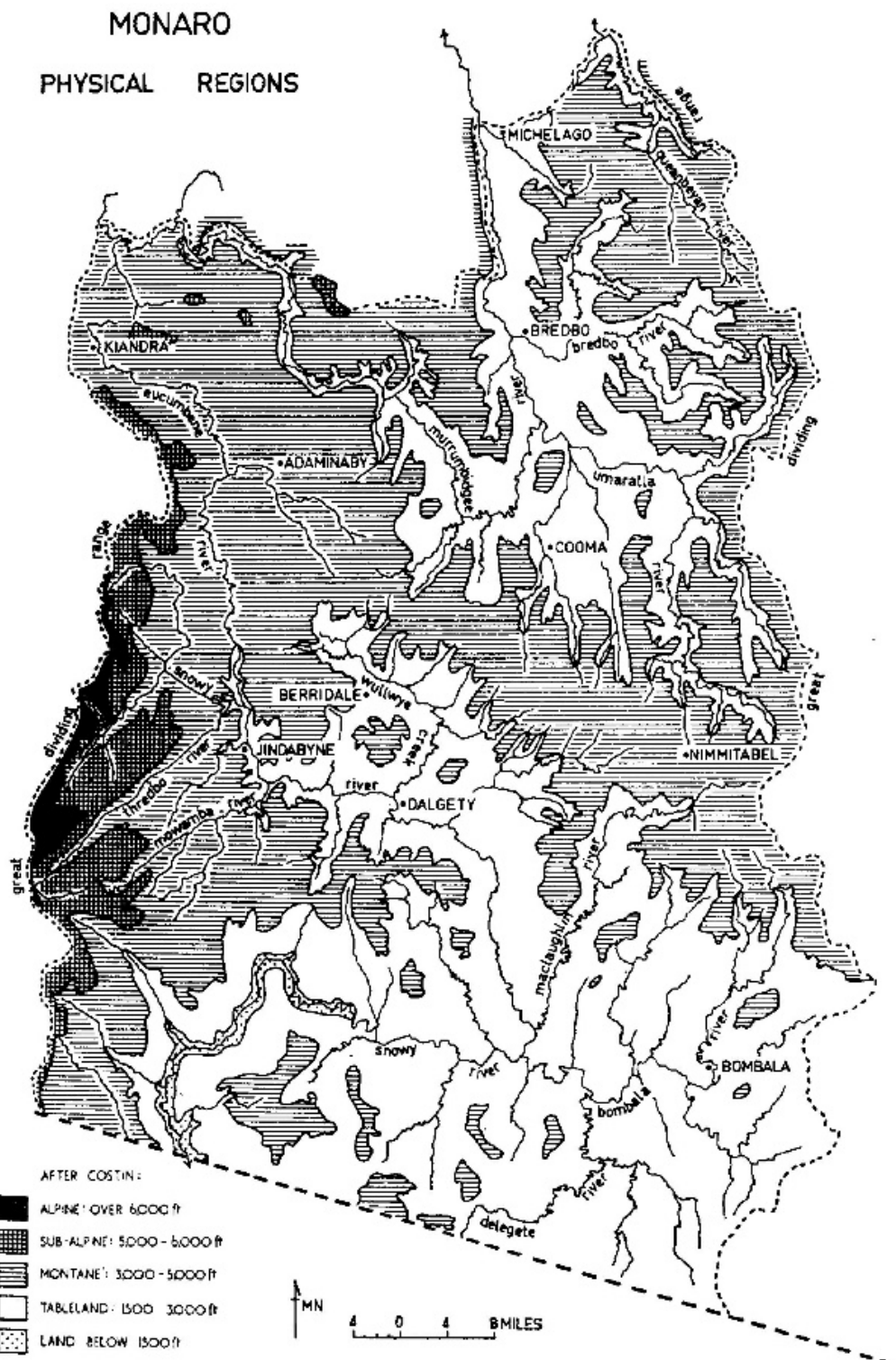
Figure 5   **Physical relief of Monaro. Source: Hancock WK (1972)** *Discovering Monaro*, **Cambridge**

Conclusion

Monaro has a consistent baseline of pastoralism, all over the river valleys and the subalpine plains. Wool, lambs and beef cattle have been the mainstay since the 1820s, although transport was less than adequate until a railhead was established at Cooma in 1889. The realisation that in most years the high alpine pastures could supplement the lower plains increased the carrying capacity greatly from the 1860s onwards.

Wheat-growing was never insignificant but failed to have more than a local importance and in the twentieth century wilted, along with the Monaro flour mills, before imported flour.

Mineral wealth was not of critical importance, although the Kiandra goldfield, significant in 1860–61, continued to produce some revenue and some employment until the 1930s. Copper seemed promising in the early 1870s, but there was no lasting success and the last mine closed in 1914.

Tourism, with winter sports and some fishing, was the new element in the twentieth century, capped ironically after 1949 by the biggest engineering works in Australia. The completion of the Snowy Mountains Hydro-Electric Scheme, with dams, access roads and, as a corollary, ski-lodges and chairlifts, brought some local benefits but was also a triumphant symbol for a whole development ethos. The Snowy Mountains have shared their environmental losses with the rest of Australia.

Table 6   **Surviving stone churches of the Monaro**

Place	Denomination	Dedication	Date of Building	Rebuilding on new site
Adaminaby	Presbyterian	St Andrews	1888	1957
Adaminaby	Anglican	St John	1906–07	1957
Berridale	Presbyterian	St Peter	1889	–
Berridale	Anglican	All Saints	1909–10	–
Boloco	Anglican	St James	1871–73	–
Bombala	Anglican	St Matthias	1857	–
Bombala	Presbyterian	St Andrew	1872	1911
Cooma	Anglican	Christ Church	1845–46	–
Cooma	Anglican	St Paul	1864–69	–
Cooma	Catholic	St Patrick	1874–77	–
Cooma	Presbyterian	St Andrew	1880–82	–
Dalgety	Catholic	Star of the Sea	1878	–
Gegedzerick	Anglican	St Mary Virgin	1849–60	–
Jerangle	Anglican	St Andrew	1875	–
Michelago	Catholic	St Patrick	1865 (ruined)	–
Moonbah	Catholic	St Thomas	1890	–
Nimmitabel	Catholic	St Andrew	1863	–
Nimmitabel	Anglican	St Peter	1878–82	–
Round Plain	Presbyterian	–	1870	–

MONARO

THE THREE COUNTIES
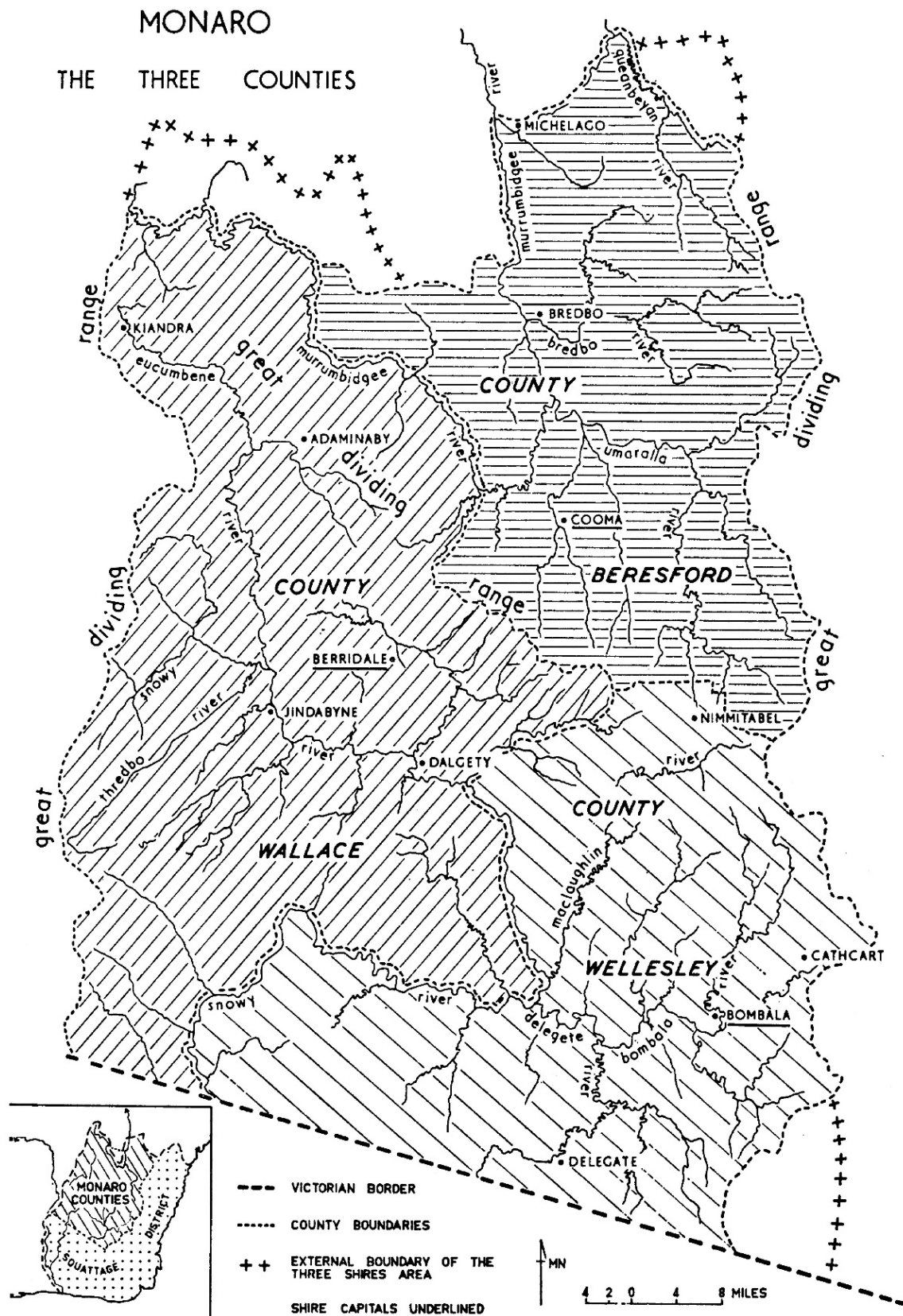
Figure 6 The 3 counties in Monaro in 1848. Insert: Monaro pastoral district. Source: Hancock WK (1972) *Discovering Monaro*, Cambridge, map 3, 9

Figure 7   The pastoral runs in Monaro in 1850. Source: Hancock WK (1972) *Discovering Monaro*, Cambridge, map 7, 47
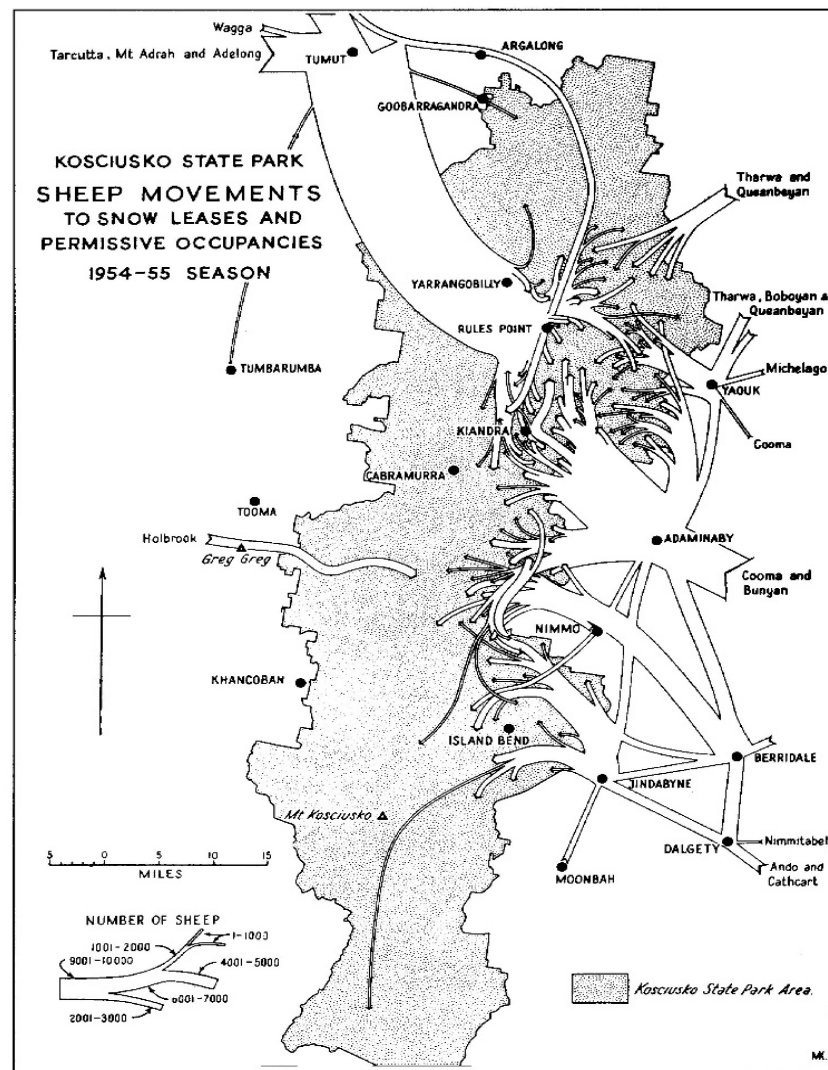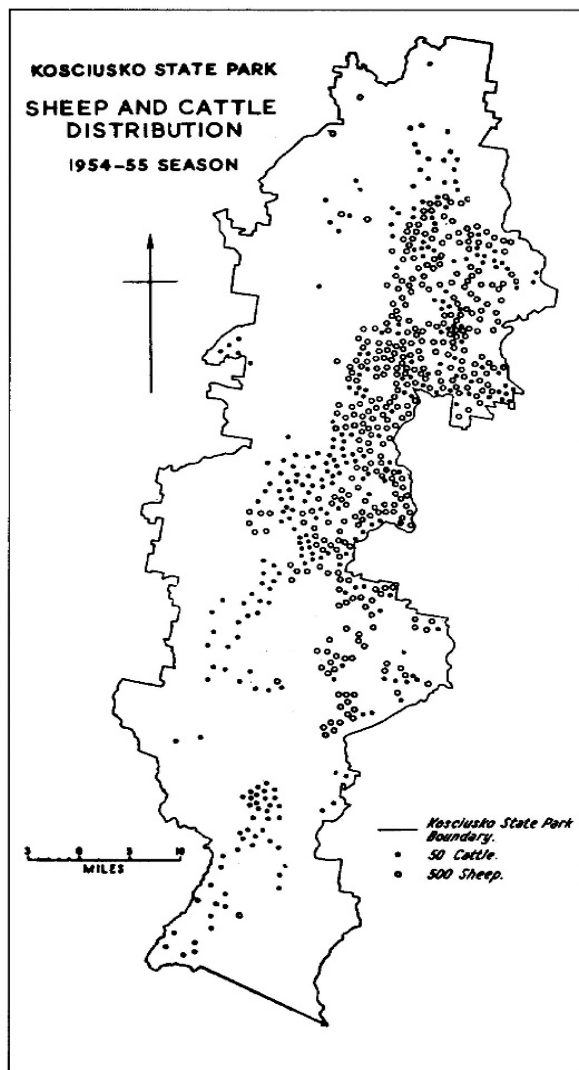
Figure 8 Transhumance in Monaro in 1954–55. Source: King HWH (1959) 'Transhumant grazing in the snow belt of New South Wales', *Australian Geographer*, 7(4), 133, 136
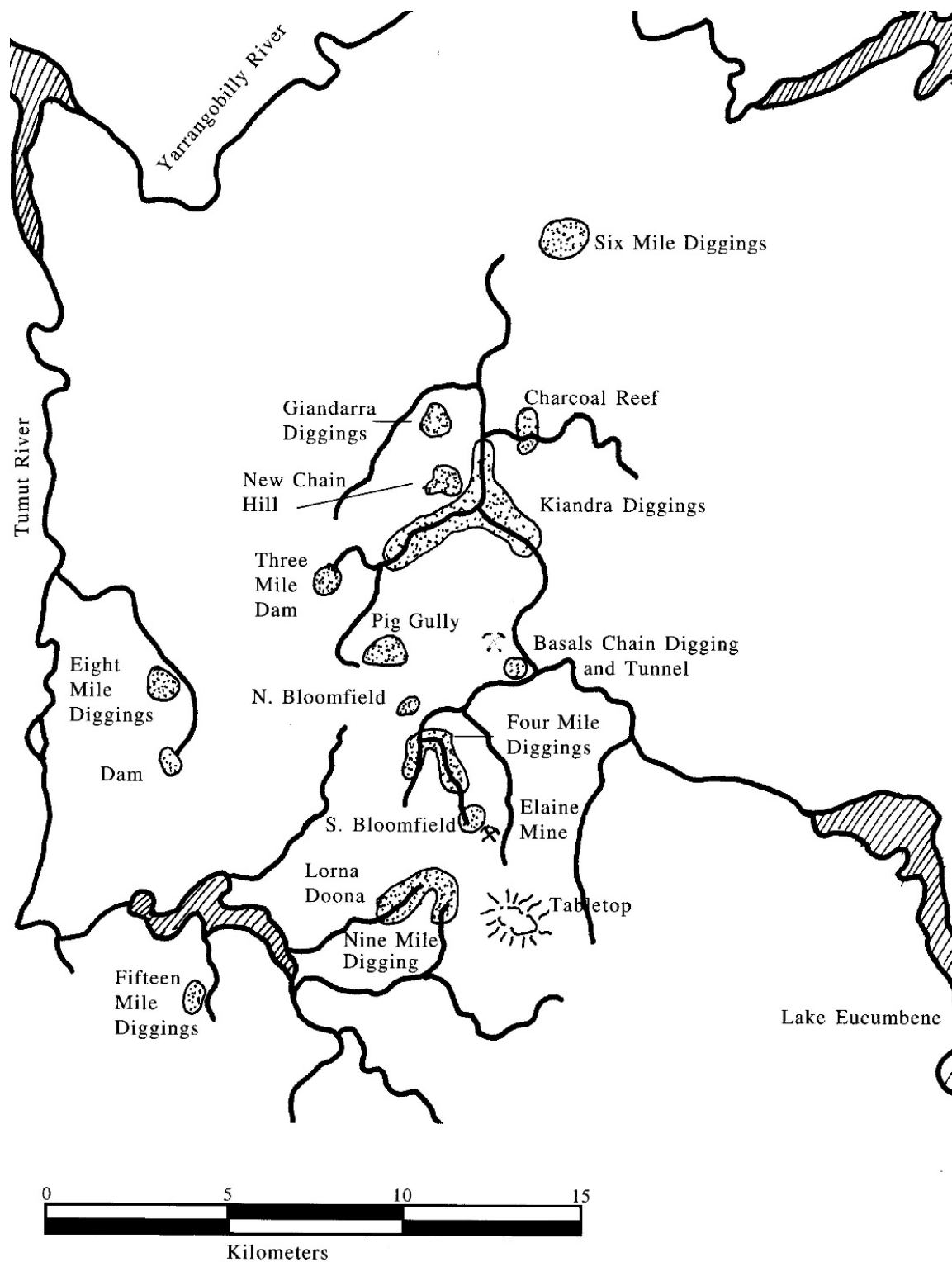
Figure 9 **Mining sites around Kiandra. Source: Pearson M (1979)** *A report on the mining history and remains in the northern half of Kosciusko National Park*, **NPWS, Sydney**

12. Murrumbidgee

This region coincides with the middle section of the Murrumbidgee River including drainage from the eastern uplands by way of the Tumut River. The river was navigable to Wagga Wagga, which provides the central town of the eastern part of the region. Undulating slopes give way in the west to level plains. This is now wheat–sheep country with yellow, grey and white box, stringybark and river red gum. To the west wheat continues to be grown as the river meanders through level plains with many prior streams. Here irrigation becomes important, and the Murrumbidgee Irrigation Area forms the western boundary beyond which are extensively grazed plains of the Western Region.

Local government areas

Coolamon, Cootamundra-Gundagai Regional, Griffith, Hilltops (part of), Junee, Leeton, Lockhart, Narrandera, Murrumbidgee (part of), Snowy Valleys (part of), Temora, Wagga Wagga.

Map 18   **Local government areas and boundaries of the Murrumbidgee historic region**

Aboriginal people

The entire Murrumbidgee area was Wiradjuri country. The southern extent of the 60,000 square kilometres where Wiradjuri was the dominant language lay south of the Murrumbidgee River and extended westwards to the west bank of the Lachlan on the Western Plains (Region 16).

The Murrumbidgee was a plentiful giver of shellfish and fish, including large Murray cod, and the plants, tubers and nuts of the country between the major rivers supplied seasonal food: there were yam daisies in spring, summer and autumn, wattleseed in July and August, orchid tubers in August and September. Larger game such as possums, kangaroos and emus were captured by groups of hunters to make up a varied and nutritious diet.

Like the Aboriginal people of Monaro and the southern tableland (Regions 10 and 11) the Wiradjuri came annually to the alpine peaks in the extreme south-east comer of their country to feast on bogong moths. Tumut and the western flank of the alps were in Wiradjuri territory, directly adjoining the Monaro Ngarigo on the eastern slopes. Here in the Bogong mountains and the Snowy Mountains, large numbers of Aboriginal men assembled each December and January to collect dormant moths and roast them or pound them into cakes, while the women and children remained in the valleys below.

Surviving sites of significance to the Wiradjuri people are not as numerous along the Murrumbidgee as on the Macquarie River or the Lachlan. Moreover, there are only 3 carved trees (one of them a burial site) near the Murrumbidgee. The absence of surviving carved trees is in strong contrast to the density of such trees between the Macquarie and the Bogan in the far north of the Wiradjuri area, but the original distribution was not necessarily the same as surviving examples (Camm and McQuilton 1987). Certainly the Murrumbidgee group of the Wiradjuri were numerous and, like Wiradjuri elsewhere, have preserved a strong sense of identity into the present.

The dislocation by European settlers of normal Aboriginal routines of life was increasingly severe from the 1830s onwards and new diseases, particularly syphilis and influenza, took a terrible toll of the Wiradjuri. James Gormly who went to the Murrumbidgee in 1844, told how at that time he regularly saw groups of 300 Aboriginal people (Gormly 1906). There were predictable problems over cattle. Frank Jenkins of Bangus station, on the south bank of the Murrumbidgee in the 1830s 'found that about 200 aborigines had surrounded a mob of his cattle and were ringing them around, and within the circle formed the blacks were riddling the cattle with spears all the time' (Gormly 1906:40).

There was a whole series of incidents along 100 kilometres of the Murrumbidgee, centring on Narrandera from 1839 to 1841, which have been called the 'Wiradjuri wars'. The incidents, which involved cattle-taking by the Aboriginal people and the spearing of a few stockmen, were in reaction to atrocities by the settlers and the loss of traditional fishing grounds and significant sites. Many Aboriginal people were killed at Hulong in 1840 and about 70 Wiradjuri men, women and children were massacred on Murdering Island in the Murrumbidgee in 1841 (Gammage 1986). Twenty years later, surviving

Wiradjuri told the novelist Rolf Boldrewood that 'white fellow shoot 'em like possum' (Browne 1890 cited in Gammage 1986:35).

The end result was that the Wiradjuri were deprived of their riverine territory and driven to the hills and to employment on the stations as cattlemen, general hands, sheep shearers, flour grinders or, in the case of the women, domestic servants and mothers of settlers' children. Ultimately the Wiradjuri were forced to live in the towns established to service those who had supplanted them.

Dame Mary Gilmore spent her childhood and adolescence in Wiradjuri country, as her father Donald Cameron moved around the Murrumbidgee region. Cameron was a close friend and blood brother of the 'last great chief' of the Wiradjuri and Mary was also 'made a child of the tribe and a "sister"' in the early 1870s. Much later Mary Gilmore recalled that:

> The result was that wherever the blacks were I was protected. Once when poisoned by arsenic intended for them, I was with them on the banks of the Murrumbidgee, alone, for six weeks. I grieved to leave them and they 'wept' me as I left. Being a 'sister', all the men and boys had to be away when this occurred – a rare ceremony, and given to very few white people indeed. But as we rode away, my father carrying me on the front of the saddle, the chief waited by a tree to see us pass, spoke a few words of friendship, and waved us farewell. I never saw any of that kind, friendly body of people again. They were raided, and all that were not in hiding were killed. It was because of word that this was to happen that my father had to come for me. What warning he could give he had given the chief, knowing he took his own life in his hand by even hinting a warning, should it leak out that he had given one. 'Better we should all die', said the chief, sadly, 'than that my clean young men should become like the white men's sons'. I remember, too, that the men of this group, knowing how few could escape, themselves killed the young women of the tribe so that they might avoid capture and pollution. A feast was ordered by the chief, and when the girls, replete with food, were asleep – they slept on.

And Dame Mary Gilmore wrote a touching lament for her friends and for the whole Wiradjuri people:

> Harried we were, and spent,
> Broken and falling,
> Ere as the cranes we went,
> Crying and calling.
>
> We are the lost who went,
> Like the cranes, crying;
> Hunted, lonely, and spent;
> Broken and dying
> (Gilmore 1948:288–289)

By the late nineteenth century few of the surviving Wiradjuri lived a traditional life. JB Gribble, the well-known missionary, gave a graphic account of the exploitation of the Aboriginal people, particularly Aboriginal women, still in the area of Darlington Point on the Murrumbidgee in the 1880s. He describes Darlington Point as 'the very focus of iniquity on the Murrumbidgee, so far as traffic in the blacks was concerned'. He

established a mission station in the bush called Warangesda, but 'when the carnal interests of [white] men were interfered with by us they did all in their power to thwart our endeavours', not least by supplying alcohol to 'the women's camp' (Gribble 1884 cited in Reynolds 1972:136–137).

Gribble also shows, however, the survival of traditional fishing among the Aboriginal men in the 1880s. When the mission was short of meat, the Aboriginal men went to the Murrumbidgee with a cart and on 2 consecutive days speared a total of half a tonne of Murray cod. 'Even the black fellows themselves were amazed at our success. We could only remember Galilee, thank God, and take courage' (Gribble 1884 cited in Reynolds 1972:138–139).

Most of the Aboriginal people, however, had no such Galilee. The numerous towns of the area, which became very closely settled with the irrigation schemes , contained an increasing Aboriginal population. Today in the region, the Wiradjuri are concentrated in the towns of Narrandera and Griffith, with significant numbers in Wagga Wagga, Leeton and Tumut and smaller communities in Junee, Cootamundra, Harden and Young.

A high degree of marriage within the Wiradjuri community, to the exclusion of other Aboriginal groups, has helped to foster their sense of identity; and the Wiradjuri Aboriginal Land Council and Cultural Resource Centre, established in 1982–83, are now vital focal points for the original people of the Murrumbidgee (Camm and McQuilton 1987).

European settlement

When Charles Sturt stood on the hill above Wantabadgery in the summer of 1829, he and George Macleay:

> enioyed a most beautiful view. Beneath us to the S.E. the rich and lightly timbered valley through which the Murrumbidgee flows, extended, and parts of the river were visible through the dark masses of swamp-oak by which it was lined, or glittering among the flooded-gum trees, that grew in its vicinity. In the distance was an extensive valley that wound between extensive mountain ranges. More to the eastward, both mountain and woodland bore a dark and gloomy shade. To the westward, the decline of the country was more observable than ever; and the hills on both sides of the river were lower and more distant from it. The change in the rock-formation and in the soil, produced a corresponding change in the vegetation. The timber was not so large as it had been, neither did the hills any longer bear the green appearance which had distinguished those we had passed to their very summits (Sturt 1833 cited in Swan 1970:2–3).

The features of the Murrumbidgee valley as modified by Aboriginal use, but still unchanged by Europeans, were expressively captured by Sturt. He understood very well the effect of the steady decline in regular rainfall as the river flowed westwards, with the consequent change in vegetation and stock-carrying capacity (Figure 10.)

Within 15 years of Sturt's visit, most of the water frontages along the Murrumbidgee had been occupied by pastoralists. Gundagai, on the track from Sydney to Port Phillip, was the first township to develop around Gundagai run, which bad been established by 1826 by Sugar O'Brien. Already Peter Stuckey was on the south bank of the

Murrumbidgee, introducing those allegedly St Helena willows which became rivals to the eucalypts and casuarinas along the river. At the junction of the Tumut and the Murrumbidgee, north of Gundagai, Ben Warby's stock were also grazing in 1826.

The pastoral expansion beyond the 'limits of location' spread west along the Murrumbidgee. The area around Wagga Wagga was settled by emancipists such as Charles Tompson at Eunonyhareenyha (now North Wagga Wagga) and George Best on the south bank along the serpentine meanders where Wagga town was established between 1847 and 1849.

The area around Wagga Wagga and Gundagai developed rapidly. The early pastoralists, all people with stock and capital gained in the 19 counties, were reinforced by new men also on the make. As the prime frontages on the reliable Murrumbidgee were taken in the 1820s and 1830s, new stations were opened on the tributary creeks both north and south of the main river. In the east, John Harris stocked Kalangan and James Roberts Currawong in the vicinity of Murrumburrah on Currawong Creek about 1828; stations fronted on Muttama Creek from Cootamundra to Coolac, and on Billabong Creek where Nangus was stocked by the Macarthurs of Camden Park.

In the further west, Buckingbong was the prime station of Narrandera, with 15 kilometres of Murrumbidgee frontage as its northern boundary. Whereas most of the western runs were entirely dependent on the river for summer watering, at Buckingbong:

> swamps and creeks fed vast beds of the nourishing tall spike rush after which the run was named, and plains of saltbush and kangaroo grass extending far to the south and west kept cattle fat even in drought years (Gammage 1986:38).

Unlike those on the eastern Murrumbidgee, these western pastoralists met considerable resistance from the Aboriginal people. During the so-called 'Wiradjuri War' the 2 earliest settlers at Buckingbong were driven out by the Nurrungdera group of the Wiradjuri, Michael Byrne in 1839, Robert Best in 1840. Only in the 1840s were the Jenkins brothers able to survive on Buckingbong.

The bad relations between Aboriginal people and settler resulted in the temporary abandonment of some of the Narrandera stations: Grong Grong, Narrandera, Brillinball and Ulong were all unoccupied in 1839 and 1840 as a direct result. But in the later 1840s, before the major drought of 1850–51, the European confidence reasserted itself and everywhere sheep and especially cattle increased in number. From 1848 to 1850 the gazetted squatting runs in the Murrumbidgee Pastoral District totalled 237. This total includes 22 runs fronting on the Murray and less than 200 were actually within the Murrumbidgee heritage region, but they covered all the best grazing land in enormous slabs. The largest was Henry Osborne's Brookong on Billabong Creek, covering some 192,000 hectares south of the Murrumbidgee, partly in the Murray region. Like many other southern properties, Brookong was only a large link in a chain of pastoral stations, in Osborne's case controlled from Marshall Mount in Illawarra.

After the traumatic drought of 1850–51, the opportunities offered by the gold rushes and the consequent rapid increase in rural and urban population brought riches to the

Riverina in general, along both the Murray and the Murrumbidgee. Meat prices soared upwards between 1851 and 1854 and the Murrumbidgee stations:

> became a vast fattening paddock, as squatter-dealers drew store cattle and sheep from the north and sold fats to Victoria. Overlanders no longer followed the rivers west to South Australia, but crossed them south to Victoria. Wagga, Narrandera and Hay [in the western plains region] became crossing places: local squatters were literally on the road to a fortune (Gammage 1986:51).

John Peter, already wealthy from investing in South Australia's copper boom, acquired a total of 400,000 hectares mostly on the Murrumbidgee and the Lachlan between 1852 and 1861; while the Jenkins brothers who had weathered the storm at Buckingbong acquired another 100,000 hectares in the region.

The succeeding decades saw the triumph of sheep over cattle. The gold rush had exaggerated the market for beef and after 1860 the number of cattle sharply declined in the whole Riverina area, from 418,000 in 1859 to 259,000 in 1870, whereas sheep quintupled over the same period, from 1,000,000 to 5,500,000, particularly on the saltbush plains at the western end of the region. The Murrumbidgee and Lachlan Pastoral Districts (Regions 9, 12 and 13) contained around 75% of the entire pastoral investment of New South Wales in the 1870s.

The corollary of this pastoral expansion was the clearing of much of the still uncleared bush, the sinking of wells, the building of dams for stock and the systematic fencing of paddocks, even on the backblocks. Towns were encouraged and communications were transformed.

Towns

Gundagai was the earliest service town to be created. An inn and a smithy were already on the future town site by 1838, the site was surveyed in 1840 and a few allotments were sold in 1842. A disastrous flood in 1844, however, forced the resiting of the town on higher ground on the opposite (south) side of the Murrumbidgee. After this disrupted start, Gundagai became by 1850 the principal town south of Yass, with 4 hotels, a courthouse and the usual services. Again flood destroyed the town in 1852 and 1853. Only the highest point, Sheridan Street, was unaffected and that street was transformed into the main street of the third town, high on Mount Parnassus. Recovery was rapid, as in the late 1840s, and the major flood of 1870 did not impede the growth of later colonial Gundagai.

Wagga Wagga, which became a far more important regional centre than Gundagai, had begun rather later. The town of Wagga Wagga was gazetted in 1847. As at Gundagai, a court of petty sessions was established, but, unlike Gundagai, the administrative need was the primary reason for the town's existence and the police station and courthouse were opened at once in 1847. Wagga Wagga therefore 'had regional responsibility from its beginning because it dispensed justice over a wide area' (Swan 1970:41). It suffered from the 1852–53 flood, but not to the extent of Gundagai upstream. Stock sales began in 1855–56, the population virtually doubled between 1856 and 1861 and Wagga Wagga was poised for vigorous growth in the 1870s and 1880s.

As the old road south through Gundagai became largely superseded by the road from Dubbo and Forbes to Albury via Wagga Wagga, bypassing Gundagai, the strategic position of Wagga Wagga was reinforced. Another factor in Wagga's success was that the new steam-boat traffic could reach Wagga but could not ply upstream regularly as far as Gundagai. The careful analysis by Keith Swan, however, has shown that in fact few paddle-steamers did reach Wagga Wagga regularly either and that only in the 1870s was this link with the Murray and Victoria of any real significance. This brief importance of the river traffic was, moreover, the result of local businessmen forming the Wagga Wagga Steam Navigation Co in 1869 and purchasing the steamer *Victoria*. But even at the peak of their business, the *Victoria* could make only 6 round trips a year between Wagga Wagga and Echuca.

Further downstream the Murrumbidgee was more regularly navigable, but it never carried steam-boat trade to the extent of the Murray. Nonetheless, the rapid development of Echuca as a river port after the railway from Melbourne reached there in 1864 had repercussions on the Murrumbidgee. Narrandera had grown up as a crossing place for road traffic and had had steady growth on its flood-free site after its gazettal as a town in 1863. River transport for the burgeoning timber industry in the Narrandera district was of critical importance in the 1870s and 1880s, but was partly replaced by the Narrandera to Hay railway, opened in 1882, and decisively superseded when the railway bridge across the Murrumbidgee towards Jerilderie was completed in 1884.

Still further west, however, the steamer trade had a decisive influence on Darlington Point. The first steamer came past Darlington Point in 1858 and the potential for selling local timber for boiler fuel was realised. As a result, steam boats stopped regularly, an inn opened in 1864 and another in 1866 on the south bank at Waddi, and in 1869 another hotel opened on the north side. Significant development came to Darlington Point in 1876 when the greatest of the Murray trading firms, McCulloch and Co, leased 2 hectares at the settlement and erected a wool store and a general store. Five years later a proper wharf was erected. Simultaneously the rail link to Narrandera was opened in 1881, but, unlike the larger settlement, Darlington Point continued to have a steamer trade for another half century.

A telling memorial to the decline of the river trade at Narrandera is the hulk of the *Wagga Wagga*. This 86-tonne wooden steam boat had been built at Cornella in 1877: after a long series of misadventures, it was used for pleasure trips from Narrandera in the 1890s and when it sprang yet another leak on Armistice Day 1918 its disgruntled owner left it to rot downstream from Roach's mill wharf (Gammage 1986; Phillips 1972).

There are many towns in the Murrumbidgee region far removed from the major river. They grew up for a variety of reasons: Junee because of the Goulburn to Albury railway in 1878 and despite a lack of reliable water; Young and to a large extent Tumut by goldrushes in 1859–60; Griffith, Leeton and Coleambally as deliberate creations of the irrigation schemes of the twentieth century. The dynamics of growth of such towns were not, however, dramatically different from those of older centres and in the last 120 years changes in land use from a basically pastoral economy to one which is primarily

agricultural have been critical factors throughout most of the region, not only in the areas of intensive irrigation.

Up to the 1860s the production of cereals in the Murrumbidgee region had been for local consumption only. The process of breaking up large pastoral properties into much smaller selections, despite very adverse weather from 1862 until 1870, resulted in a sharp increase in mixed farming. Nixon's flour mill in Wagga Wagga, opened in 1857, had encouraged wheat production as much as it reflected it, and in 1866 a second mill, on the other side of the river at Wagga, opened successfully while the acreage under wheat continued to rise. By 1875 Wagga Wagga had ceased importing wheat from the eastern areas, such as Tumut, and was exporting the grain reaped from 2,800 hectares. With the minimum size of blocks bought by conditional purchase raised to 256 hectares, wheat farming received further encouragement.

In 1879 a reporter for the Melbourne *Express* toured the region from Darlington Point in the west to Wagga Wagga in the east, as far north as Junee and south into the Murray region. He inspected at least 200 selections, varying in size from 120 to 1,600 hectares.

> The fact that he carefully mentioned the few farms on which he saw agricultural machinery indicates that at this time most of the selectors still relied on manual labour for their sowing and harvesting operations. With but very few exceptions they all had a second string to their bow in the way of sheep, cattle or pigs, and were self-supporting in foodstuffs. What social life there was consisted principally of church-going and associated activities, with the visit to the local show as the annual highlight. The wheat yield throughout was estimated at 20 bushels to the acre, the oats being an unknown quantity due to take-all, strawing and other factors. There was no mention of linseed, sugar-beet or tobacco being anywhere in the area visited. The great majority of settlers on the Narrandera side of Wagga Wagga were found to be Victorians, thrifty, hardworking and capable, and the writer concluded that the future of Riverina as a grain-sowing centre was assured in their hands (Irvin 1962:51).

The failure to improve farming methods prevented the Murrumbidgee from realising its potential for decades. The major change came in 1892 when the state government established the Experimental Farm outside Wagga Wagga. This farm not only tested wheat varieties, developed improved strains and gave advice to local agriculturalists, but also encouraged the introduction of new crops, such as grapes, melons, potatoes, maize and fruit. Wagga Wagga Experimental Farm gained an international reputation and the whole central Murrumbidgee area became far more productive in the twentieth century.

Irrigation

The enormous change came through irrigation. The Irrigation Areas (IAs) within this region are centred at Leeton (the Murrumbidgee Irrigation Area), at Griffith (the Bencrembah IA with the Tabbita IA to the north) and, south of the Murrumbidgee, at Coleambally.

The concept of diverting water from dependable catchments to thirsty areas was not unfamiliar in the nineteenth century and it was practised on a small scale for a variety of industrial and mining purposes. The programs in California for desert reclamation in the

1870s did not go unnoticed in Australia, but only after the financial crisis and major drought of the 1890s were any practical steps taken. The Water Conservation and Irrigation Branch of the New South Wales Department of Mines had already been created in the late 1880s, under HC McKinney, who had had experience in hydraulic engineering in India. After a report by Colonel Home in 1896, McKinney proposed the building of a substantial reservoir by damming the Murrumbidgee and 3 major tributaries at Burrinjuck, west of Yass on the southern tableland. The Water Rights Act of 1895 had given the necessary powers to the government and after the drought ended the New South Wales government implemented the McKinney proposals. It decided, moreover, that the Murrumbidgee area, not the Murray area as urged by Home, should have the benefit of Burrinjuck water. The dam at Burrinjuck began to be built in 1906. Although it was not completed until 1928, the first water reached Yanco north of Narrandera in July 1912 and 120,000 hectares between Yanco and Griffith were acquired by the newly created Water Conservation and Irrigation Commission.

In preparation for intensive farming on very close settlement, an agricultural college had been established at Yanco in 1909, following the successful Experimental Farm at Wagga Wagga.

The American architect, Walter Burley Griffin, fresh from his success in winning the competition to design the new federal capital, was invited in 1913 to plan 2 new towns, Leeton and Griffith (Figure 11). The layout of these 2 towns, showing in microcosm some of the concepts and aesthetics which were writ large at Canberra, has survived very well. Leeton already in 1911–12 had become the administrative centre for the Irrigation Trust, with 'a structure of weatherboard wherein new members of the staff could stay until they were able to obtain tents' (Bowmaker 1968:16). With the bureaucrats' tents laid out in tidy rows and a construction camp at the quarry to the north, town allotments in Burley Griffin's irregular circles sold briskly in 1913. The bureaucrats were the first to be housed on the outer ring roads, where Acacia Avenue East now boasts a historic row of this 1913–14 development. The police station, which was under canvas at the quarry camp in 1912, moved into weatherboard in 1913 and graduated to brick in 1923 (Bowmaker 1968).

To service the new, irrigated farms at Leeton a butter factory was built in 1913 and in the following year the first canning factory, initially for tomatoes, but soon canning peaches and other fruit as well. The farmers on their plots of a mere 35 to 40 hectares were trying to grow crops, fatten stock and milk cows: but the farms were too small and the farmers too inexperienced. Unsuccessful farmers were compensated in 1916–17 and the farming allotments were doubled in size. All in all the scheme suffered major dislocation until the First World War ended and soldier settlers were encouraged to take up the farms.

Because of the difficulties encountered at Leeton between 1913 and 1916 the second irrigation town, Griffith, was delayed. Burley Griffin's designs were put into execution in 1916 and over the next 4 years the town was slowly transformed from a small tent community into a planned environment. The optimism which was expressed in the original brief to Burley Griffin, who was asked to design a town for 30,000 people, was

only partially realised: in 1980 the population of Griffith was still only 15,000, one half the size projected in 1915.

Italian immigration gave and gives Griffith its distinctive character. Italian miners from Broken Hill were among the first settlers in the proto-town in 1913 and rapid settlement and chain migration from certain parts of Italy came after the First World War. Because many of the inexperienced soldier settlers and other irrigation farmers left in the 1930s, Italian families were able to buy farms cheaply. By 1933 about 10% of the fruit farms were in Italian hands, by 1954 at least one half. A combination of Italian interests and the large McWilliams company created a major wine industry at Griffith since the 1960s.

Leeton, on the other hand, concentrated on fruit growing. The highly important Leeton Fruitgrowers' Co-operative Society was founded in 1932 and took over the cannery in 1935: until the 1960s this was the dominant fruit-canning business in Australia.

The third major irrigation area had a much less troubled birth and adolescence. Coleambally was planned in 1952 and receives its immediate water supply from the Gogeldrie Weir on the Murrumbidgee 30 kilometres upstream from Darlington Point, quite close to Yanco and Leeton. The weir was completed in 1959 and immediately 26 mixed farms were opened to the south. The plan, a refinement of Leeton's based on experience, was for 313 mixed farms and 22 larger 'horticultural' farms. The horticultural farms opened in 1965 and mainly grew vegetables until 1970 when potatoes became the basic crop. On the increasing number of 200-hectare mixed farms wheat and sheep dominated, but since 1968 sorghum, rice and a little cotton have been grown and cattle became more popular in the 1970s. The view expressed by a sanguine local that 'a Coleambally farm is a 500-acre stretch of mud with water flowing in one end and profits out of the other' (Coleambally Progress Association 1971:29) may be too rosy, but certainly the sad mistakes made at Leeton and Griffith are much less evident at Coleambally. Unlike Griffith, the population of the township of Coleambally, hacked out of the forest in 1964, has far exceeded all projections.

Coleambally Progress Association has produced a very comprehensive study of its recent origins and Bowmaker's *Brief history of Leeton* runs to 360 pages. The documentation of the twentieth-century heritage in these towns and their surrounding small farms is as a result unusually rounded, with a great deal of direct local input. Griffith, Leeton and Coleambally are, in their different ways, aggregations of physical evidence which might be used to appraise Richard White's judgement on this whole irrigation venture:

> It is futile to blame the Murrumbidgee Irrigation Authority's failure to meet expectations of a particular group, such as farmers, engineers or politicians. It was the product of a complex interaction between limited knowledge, professional self-interest, political compromise and the community's simple desire to believe in it, all acting on considerations of economy, efficiency and the environment (White 1984:31).

The Snowy Mountains Scheme

Between the opening of the irrigation areas round Leeton and Griffith and the creation of Coleambally a great new factor in water management had entered the Murrumbidgee

scene. The Snowy Mountains Scheme was conceived to supply electricity to much of south-east Australia and to regulate water supplies in the Murray and Murrumbidgee regions. The untapped resources of the snowfield and its major river, the Snowy, had been recognised in the colonial period. In 1884 the Surveyor General of New South Wales floated the idea before the Royal Commission on the Conservation of Water that the Snowy River might be diverted northward to the Murrumbidgee and that Lake George might become a reservoir for the southern region.

The political interest in independent statehood for the Riverina focused some attention on the alpine catchment in the 1930s and the diversion of the Snowy River was again actively debated in 1938 when Burrinjuck Dam was unable to supply enough water to the Murrumbidgee Irrigation Areas.

The catalyst which turned all this into reality was the power shortage during the Second World War. After a detailed study of the hydro-electric potential of the alpine rivers in 1942, the Chifley government passed the Snowy Mountains Hydro Electric Power Act in 1949 and the Act was implemented to the full under Robert Menzies. When the Tumut Ponds Dam in the Murrumbidgee region was opened in 1958, Menzies told the invited audience characteristically, and all too accurately, that 'this scheme is teaching us and everybody in Australia to think in a big way, to be thankful for big things, to be proud of big enterprises and to be thankful for big men' (Wigmore 1968).

The Snowy Mountains Scheme was certainly big. In the years before the Talbingo and Blowering reservoirs (and Lakes Jindabyne and Eucumbene in Monaro) had filled, the Snowy Mountains Authority had done immense damage. To an extent it also repaired a great deal of this damage, for the new dams could not be allowed to fill with silt eroding from the scarred landscape and therefore soil conservation after construction works was an essential priority for the Authority. So the mountains in the east survived the onslaught of Sir William Hudson, his 9 hydro-electric stations, his tunnelling and his road building. The cost of the Scheme may or may not have been economically justified: there is argument over the cost advantages of water-generated electricity and scepticism about the cost-effectiveness of the irrigation plan. There is no doubt, however, about the way in which the Scheme caught the popular imagination and interested the international engineering world. At the cost of $820 million between 1949 and 1973, the Scheme succeeded in diverting the Snowy and Eucumbene rivers to supplement the flow of the Murray and the Murrumbidgee; it provides electricity for the central grid of New South Wales, the Australian Capital Territory and Victoria; and it gave a major boost to the confidence and profits of the engineering and construction industries in Australia. It was the supreme achievement of the development lobby and it has left a long, long shadow over Australian attitudes.

On the local level, the Snowy Mountains Authority is, and has been from the beginning, administered primarily from Cooma in Monaro, but the Murrumbidgee region has, of course, been one of the main beneficiaries of the increased water supplies. The new lakes have submerged fewer heritage items than in Monaro, but when Jounama Dam filled in 1960 Talbingo station and the birthplace of Miles Franklin were submerged. (Figure 12).

Fruit-growing outside the Murrumbidgee Irrigation Area

Fruit-growing was important in the east of the region long before the irrigation areas in the 1910s. The district around Young had already an enviable reputation for cherries. Cherry trees had been planted on James White's Burrangong station at Young in 1847, but the first commercial orchards were planted nearby in 1878 by Nicole Jasprizza, using some of the Burrangong trees. Once the railway reached Young in 1885, as a branch from Murrumburrah on the main south line, the wider market could be tapped. Over 70 other orchards were created, but Jasprizza remained supreme and by 1933 his cherry orchard was believed to be the largest in the world.

Since the 1890s many other fruits had been grown near Young: quinces, apples, pears, oranges, grapes and strawberries. After 1910 apples rivalled cherries as the major cash crop, with their Blue Star packing brand and one of the largest concentrations of Granny Smith apple trees in Australia. The soldier settlers in the area after 1918 also planted apple trees, although prunes were their speciality.

The growing of grapevines expanded in the 1920s but, unlike Griffith, no major wineries were established at Young. At Wagga Wagga, where some grapes had been grown since the nineteenth century, the scientific study of wine-making developed into a degree course at the Riverina College of Advanced Education, with very happy results marketed under the College label.

The other prominent area for cold-weather fruit was Batlow, south of Tumut. The miners in the area in the 1850s and 1860s had planted apple, plum and cherry trees (still a help in locating mining sites). The schoolmaster at Upper Adelong, OC Barberie, had admired the blossom and noted the quality of the fruit, so he settled down in 1895 to create the first commercial orchard in the district. By 1907 there were 5,000 fruit trees and many new orchards were created in the next 8 years. It was the success of the orchards which confirmed Batlow's status as a town, declared in 1910. Once the railway came in 1923 the fruit no longer had to be hauled over appalling mountain roads to the previous railhead at Gilmore, and the first cool store in New South Wales was erected in the same year close to Batlow railway station. The cool store remained in use until it was destroyed by fire in 1962: the success of fruit-growing continued unabated.

Tobacco

Tobacco had a long history at Tumut, where William Bridle grew the leaf on his property (now Rosevale) throughout the later colonial period. In general, the Chinese were recognised to have a dominant position in tobacco cultivation and at Tumut in 1889 a thousand busy Chinese gardeners grew a substantial proportion of the state's crop. In the twentieth century the British Australian Tobacco Co took over plantations at Tumut between 1904 and 1907 and again after 1922.

Tertiary education

The need for practical education for new agriculturists has dominated the post-secondary scene in the Murrumbidgee region. The Experimental Farm which opened outside Wagga Wagga in 1892 was soon training young people to spread the improved

techniques and improved strains both of crops and of animals. This farm was fundamental to the success of the wheat–sheep farm in the central Murrumbidgee and in 1949 was translated into Wagga Wagga Agricultural College, with an Agricultural Research Institute created 4 years later. The Teachers' College in Wagga Wagga had been established in 1947 and the way was paved for the later emergence of the Riverina College of Advanced Education there and its translation in 1990 into a campus of the new Charles Sturt University.

Mining: gold and copper

Just as Kiandra on the east side of the Snowy Mountains produced a goldrush, so did Batlow and Adelong on the western side. Major discoveries were made from 1852 onwards, first at Adelong west of Tumut and then at Batlow to the south. In 1853 2 Californians found alluvial gold in Stockyard Creek at Batlow, where one of them had built a slaughtering yard for stock to feed to the Adelong miners. The Mayday mine, found soon afterwards in 1853, remained the richest in the area, though the Poverty mine of 1860 was far from poor. One of the characteristics of the mining at Batlow is the number of long water races, bringing water for sluicing from Laurel Hill to the south and from Gilmore Creek to the north: the longest of these water races is some 32 kilometres from Gilmore Creek and it is estimated that the total length of partially surviving channels in the hills around Batlow is over 240 kilometres. They are particularly evident on Paddys River, at Quartzville, below Laurel Hill.

The much better known mining area at Adelong had begun in 1852, when a township appeared, but did not gather momentum until 1857. Between 1857 and 1859 an exceedingly rich lode on Mount Charcoal, above the creek, was exploited by no fewer than 80 companies: about a quarter of these made substantial fortunes, despite the costs involved in the difficult location. There was massive investment in crushing equipment, including 5 stamp batteries. The Kiandra goldrush diverted attention across the mountains in 1860 but a new rush developed at Adelong in 1872. New and old reefs were vigorously attacked and over the following 44 years the Camp, Victoria, Currajong, Donkey Hill, Caledonian, Middle and Old reefs were honeycombed with shafts while the Gibraltar Consolidated Gold Mines at Grahamstown to the north had still 240 men working underground in its final year, 1916, and had constructed one of the largest crushing plants on any Australian goldmine.

At Adelong itself the remains of Wilson and Ritchie's public crushing plant of the 1870s are of major importance, with the skeleton of one of the waterwheels still in place beside the crushing equipment and the brick chimney still standing sentinel.

As shaft mining declined in the twentieth century, dredging commenced along the Adelong Creek. As at Araluen on the southern tableland, the dredging has left its desolating mark on the landscape. At Adelong 2 different techniques were used. First there were barges with monitor-nozzles washing away the creek banks to make it possible to extract gold from the alluvial gravels. Later, bucket dredges were used all the way along the creek from Tumblong to Grahamstown. Since these steam dredges were wood-fired, even more extensive felling of box and stringybark was an ecological

corollary. Dredging appears to have stopped at the same time as reef mining during the First World War.

There were 2 other significant gold areas in the region, both in the north-east, one at Young, the other at Temora.

On Temora station there was a small goldrush in 1869. The Morning Star reef mine was sunk and the transitory town of Sebastopol had a mushroom growth. The substantial rush was from 1880 to 1884. The gold escort handled very substantial amounts of bullion in 1881 and 1882, declining to about 33% in 1883 and 1884 and then going into a very steady decline into the 1890s. The Mother Shipton main lead, found in 1881, was the principal source of wealth, but there was a great deal of puddling of alluvial gravels as well. The remains of puddling mills, 6 metres in diameter, with shafts worked either by horses or by waterwheels, are still unusually evident beside Trungley Road: failed mining sites often retain the most unusual heritage items.

To the east of Temora a major goldrush, with an infamous corollary, had occurred at Young in 1860. The area was then called Lambing Flat, on Burrangong station. James White's cook and an American, Alexander the Yankee, found the first gold near what is now Short Street in Young. By September 1860 many diggers from Kiandra and Adelong had arrived: so had many Chinese. The area of alluvial gold was soon found to be extensive, some 20 by 16 kilometres, and the number of hopefuls grew to 1,500 in October, to 3,000 in November, to 10,000 in April 1861. The Chinese were soon confined to one area, Blackguard Gully and in June and July were the object of very serious rioting indeed. This led directly to the Chinese Immigration Restriction Act in New South Wales passed in November 1861.

Having proved their racist point, many of the miners went off to the new gold discoveries at Forbes at the end of 1861. Others remained, however, and the first reef-mining shaft was sunk in 1862, with an ore-crushing mill at Chance Gully to the north. The Grenfell goldrush enticed more miners away in 1866 and output declined: the gold escort ceased to ride in 1876.

But a new phase of mining began in the 1880s when, after some unsuccessful attempts by 3 companies to sink shafts, the Burrangong Steam Mining Co succeeded in gaining some alluvial gold. In 1892 the Day Dawn Gold Mining Co was active at Stoney Creek to the west and in 1900 dredging began. The Burrangong Gold Dredging and Sluicing Co built a 70-tonne barge on a creek near the Temora road to the west, but after some destructive success, the company was wound up in 1903. Although another company dredged Burrangong and Spring creeks in 1906 and a new shaft was sunk on Quartz Reef Hill in 1909, this second phase of mining was virtually over by 1910.

There was only one more flurry of activity. ln 1937 Morobi Gold Development Ltd put yet another dredge on Burrangong Creek and succeeded in winning some gold.

The only copper ore deposits in the region are found in the extreme east. The 2 major enterprises were at Lobbs Hole south of Talbingo and at Snowball near Gundagai.

The first ore to be discovered was at Lobbs Hole, probably in 1866, but mining did not begin until 1874. No smelting was done on site at that time and development of the

shaft mine was slow, although some work was done in 1891–92. Between 1897 and 1899 however, a company reopened the mine and brought machinery from New Chum Hill at Kiandra: Kiandra in the Monaro region is only 18 kilometres away. A watercourse 2 kilometres long was dug from the Yarrangobilly River (which never dries up) to supply the highly efficient Pelton-style waterwheel which powered haulage up and down the shaft. The ore was still not treated on the spot but taken on pack animals to Yarrangobilly and on to Tumut by bullock wagon. The shafts needed constant pumping to prevent water seepage. After 1907 the new Lobbs Hole Copper Mining Co constructed a dam, perhaps on Wallace Creek, a new watercourse of 3 kilometres and introduced turbines and a Cornish pump. For the first time smelting was undertaken on site with a reverberatory furnace. Because of the transport difficulties, a claypit was dug near the Yarrangobilly and bricks were baked on the spot. Another company opened a shaft nearby in 1901 and 2 more shafts on the north bank of the river in 1907.

The village of Ravine grew up naturally in 1900–01 to house and service the mining community, but with the progressive closure of the mines between 1916 and 1919 the village declined. It did not close down immediately, although the pisé Washington Hotel and the police station closed in 1919, since the remaining miners turned their hand characteristically to eucalyptus distilling in the 1920s. Substantial remains of houses, hotel, mines and equipment bases survive at Lobbs Hole.

Since Lobbs Hole lies within Kosciuszko National Park it has some security and the benefit of a useful interim report by Dr Pearson (Pearson 1979). Snowball has neither of these advantages. This major mine is situated on Snowball Hill at the headwaters of Snowball Creek 15 kilometres south of Gundagai. The copper deposits were found in 1873 and by 1876 30 men were at work and one smelting furnace was in the process of erection. In the years 1876 to 1878 4 reducing furnaces and one refinery were erected but smelting was abandoned in 1880, leaving a large slag dump, estimated by Carne as being between 2,000 and 3,000 tonnes. When the mine reopened in 1895 the railway had reached Gundagai and ore was sent to Lithgow for treatment. Like most such mines it closed and reopened: the Snowball Copper-Mining Co was floated in 1907 but mining seems to have petered out thereafter (Carne 1908). Copper mines are very rare in the Murrumbidgee region. Because of the relatively early date of the main operations at Snowball in the 1870s, it presents potential heritage values complementary to those of the better known Lobbs Hole.

Conclusion

The water resources of the Murrumbidgee, of its tributaries and of the snow country to the east dominate the history of this region, from Aboriginal occupation up to the Irrigation Areas of the twentieth century. The water frontages were the earliest, choicest lands to be taken from the Aboriginal people; the fiercest conflicts between settlers and Wiradjuri were along the Murrumbidgee.

Although the interfluvial plains filled up with European stock, the main areas for early agriculture were in the eastern half where rainfall was more dependable and only with artificially channelled water did a major crop-growing area develop in the west around

Leeton and Griffith. The major communication links by land between New South Wales and Victoria gave first Gundagai and then, decisively, Wagga Wagga the opportunity to become major towns and the development of close settlement and agricultural education helped Wagga Wagga to its present commanding position.

There are few mineral deposits except in the eastern mountains and neither copper nor gold had a lasting effect, although the heritage items around the few mining sites are of considerable significance. The effect of the Snowy Mountains Hydro-Electric Scheme was twofold; in the east to make major environmental modifications to the mountains and in the south to create a new intensive agriculture, with new crops, new opportunities, new problems, at prodigious expense.

Figure 10   The rainfall and physical geography of the Murrumbidgee and Murray regions.
Source: CJ Sale Riverina source materials 3 and 4, Wagga Wagga 1967–68

Griffith

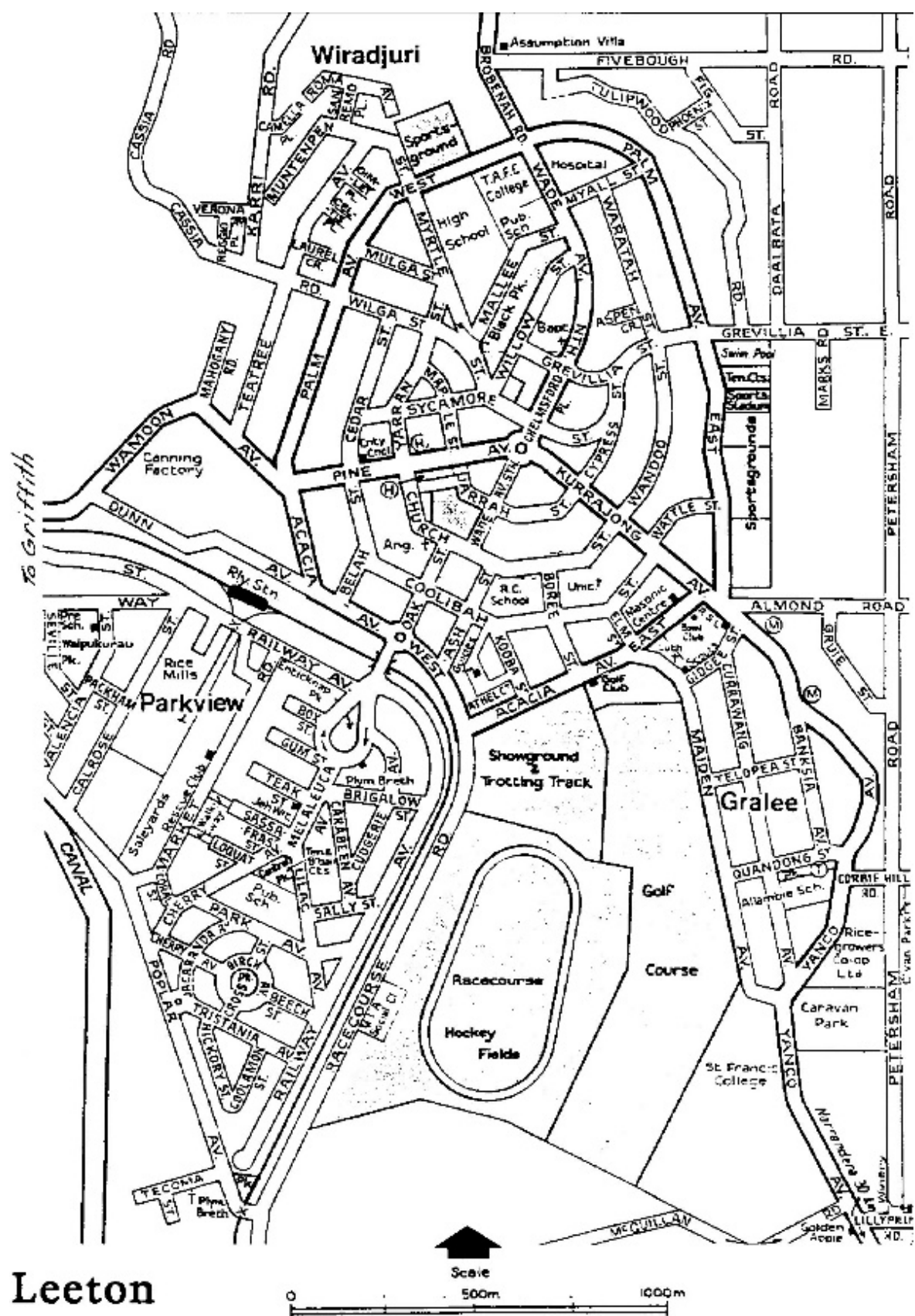**Figure 11**   **The 2 townships planned by Walter Burley Griffin: Leeton and Griffith, 1913–16**
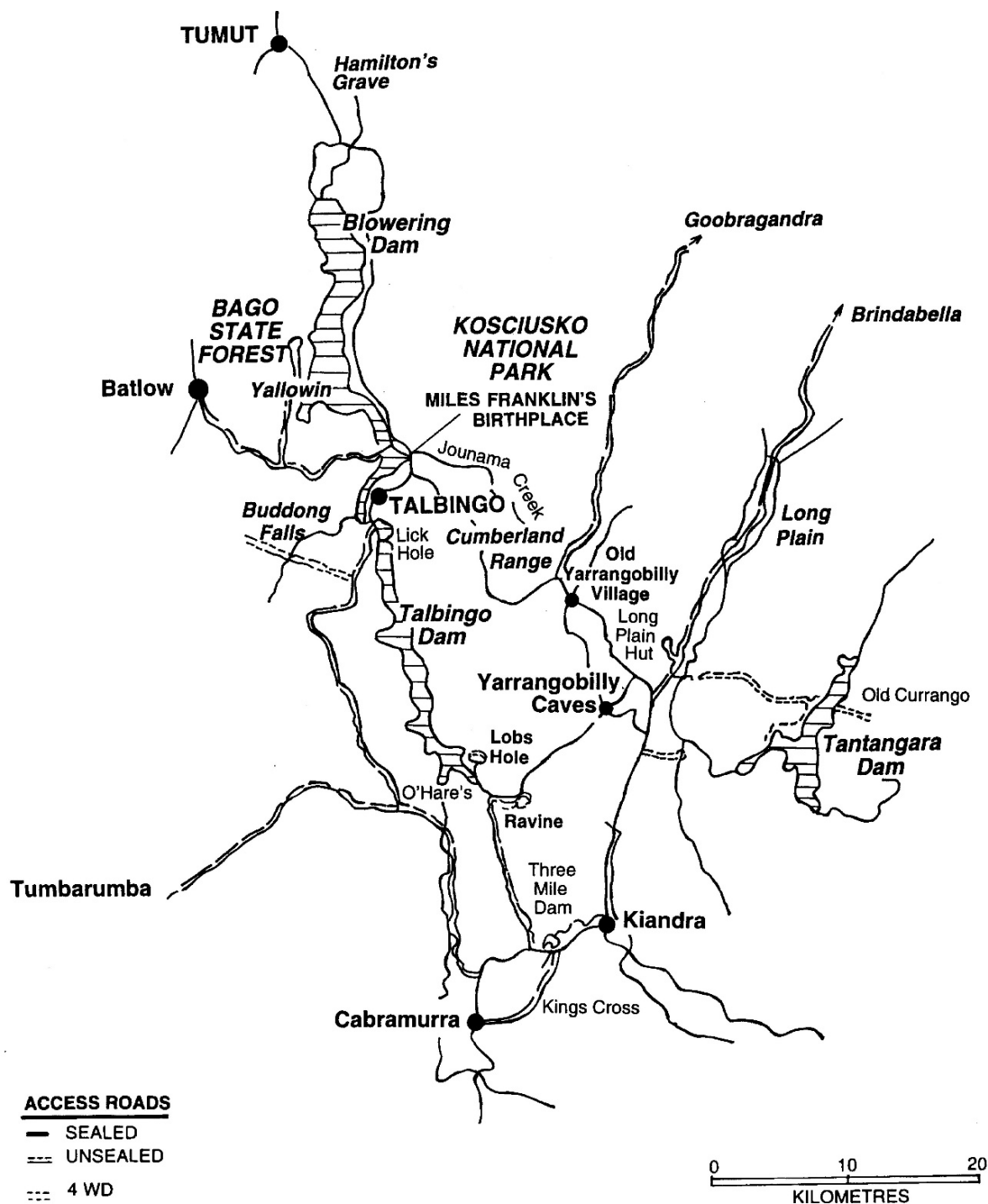
Figure 12   The south-east portion of Region 12 showing Tumut, Batlow, Talbingo, Yarrangobilly and Lobbs Hole mines in 1918 after the completion of the Snowy Mountains Scheme with the filling of Blowering and Talbingo dams

13. Murray

The area comprises the district drained to the Murray River below the mountains of the Kosciuszko Range. Typically this area was settled early by pastoralists (before 1848), and was much influenced by Victorian expansion. The Upper Murray district comprising Tumbarumba, Holbrook, Hume, Conargo and Culcairn, occupies a large part of the right bank of the Murray River. It includes a variety of land types, from the high ridges of the Alps in Tumbarumba, to the level plains of the Riverina. In the rugged area, land use is restricted to sheep and cattle. Some is included in the Kosciuszko National Park. Peppermints, alpine ash and black sally predominate.

To the west are low hills of decreasing height, undulating to steep. Steep country flanks the Murray itself almost to Albury, making the Hume Weir a possibility. Red and white box are the dominant trees. The hills give way to plains, with an imperceptible fall to the west. The timber resources become insignificant. Salt-bush, and fodder shrubs such as wilga and kurrajong become important although much of the original saltbush has been destroyed by cultivation and overgrazing. Here wheat growing is the most significant rural industry.

To the west, plains continue to predominate, while red gum timber was formerly important along the waterways. This is chiefly a grassland plain, with patches of mallee appearing in the far west. Irrigation has been locally important, particularly in the Berriquin and Wakool irrigation areas. Wheat is grown in the eastern districts, but this is primarily a pastoral area: the western limit for wheat is in Conargo Shire.

Local government areas

Albury City, Berrigan, Edward River, Federation, Greater Hume Shire, Murray River, Murrumbidgee (part of), Snowy Valleys (part of)
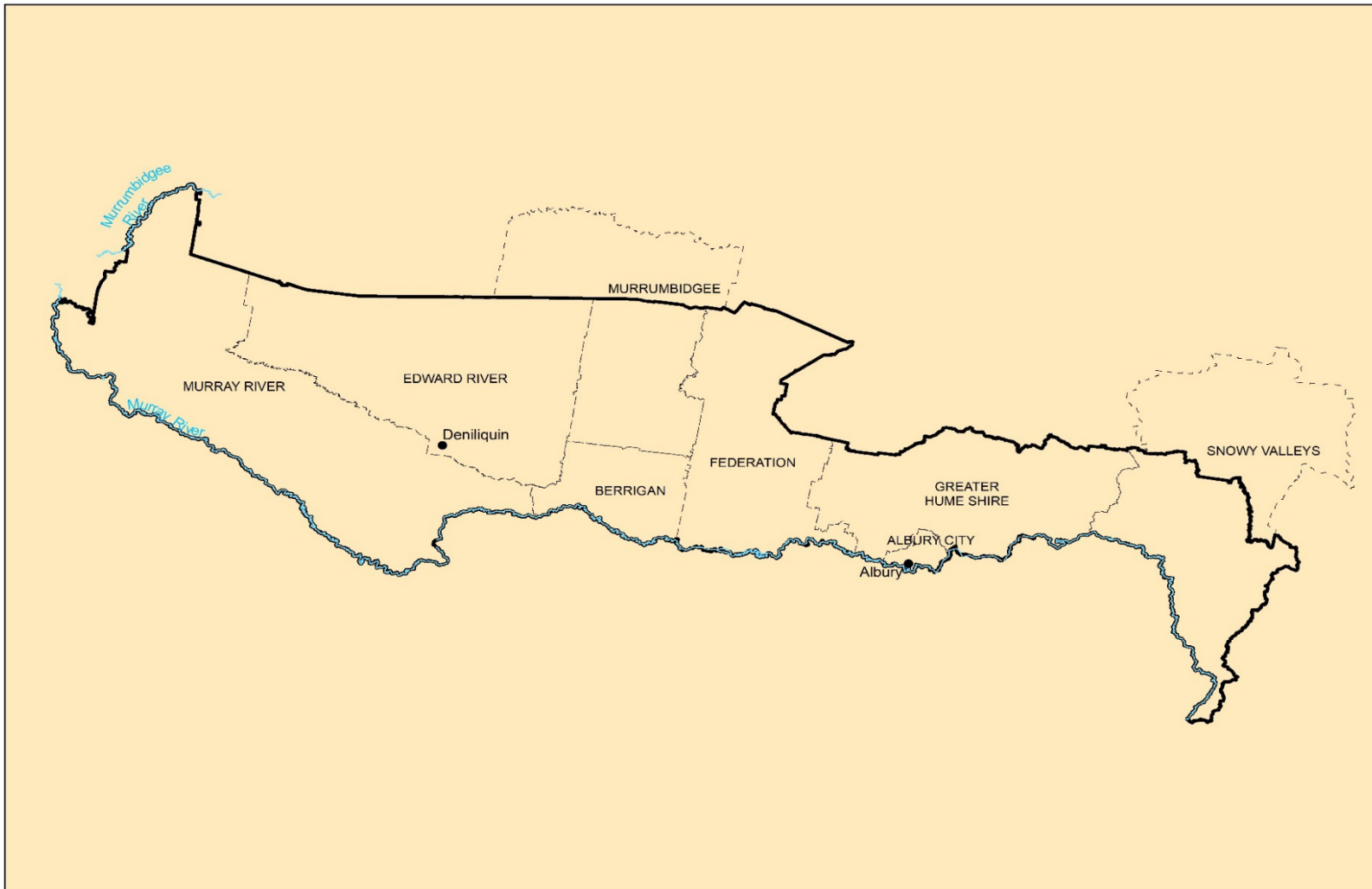
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Map 19   Local government areas and boundaries of the Murray historic region

Aboriginal people

The area lying between the Murrumbidgee and Murray rivers seemed to settlers to constitute a well-defined entity: John Dunmore Lang coined the name Riverina on the specific South American analogy of provinces called 'entre rios' ('between the rivers') and although the term has often been used subsequently for a more extensive area of New South Wales, the basic concept of an interfluvial region bounded to the north and south by the 2 major rivers, to the west by the junction of the Murrumbidgee and the Murray and to the east by the mountains has remained powerful (see Figure 10).

But even in European eyes, there are major deviations from this simple formula. In the Murrumbidgee heritage region, the local government areas of Leeton, Narrandera, Wagga Wagga and Tumut all have land both north and south of the Murrumbidgee. The border between the heritage regions 12 and 13 lies approximately halfway between the Murrumbidgee and the Murray. The Murray itself is the border between the states of New South Wales and Victoria and therefore, unlike the Murrumbidgee, has constituted a major administrative boundary for Europeans for a century and a half.

The Aboriginal perception of the land was profoundly different. The major rivers were not in general boundaries between linguistic groups. Wiradjuri country lay on both sides of the Murrumbidgee, Bangerang country straddled the Murray from Albury in the east to Moama in the west and the Narinari occupied the drier country still further west. The only area where the Murray appears to have been a boundary between Aboriginal groups was east of Albury where the north side was Wiradjuri country, the south side Duduroa. The Murray heritage region was therefore divided into 3 Aboriginal areas, Wiradjuri on the higher rainfall area to the east, Bangerang in the middle and the Narinari to the west (Figure 13); but the Wiradjuri. also occupied large tracts of country to the north as far as the Macquarie River, whereas the Bangerang occupied large areas to the south of the Murray in modern Victoria. In the west both sides of the Murray were in the one linguistic area, on the east the river was a linguistic frontier. The Bangerang used the Murray as a thoroughfare and were famous for their bark canoes: the banks of the Murray today still have a relatively large number of older trees with the wood exposed where bark for canoes was cut out in the early nineteenth century or before. To the Bangerang the river fulfilled a function very similar to that of the Hawkesbury for early European settlers: as a major highway for communications and trade and as a major source of food. As late as 1848 the squatter EM Curr travelled on the river with an Aboriginal guide in a 6-metre-long canoe with a traditional fire 'burning on a hearth of clay in the bows' to grill fish or duck en route (Curr 1883:173).

The Bangerang found plentiful food, shellfish and Murray cod in the river and fruit, tubers and nuts in the adjacent country. Although they probably joined the Wiradjuri and the people of Monaro and the southern tableland at the annual feast on bogong moths in the alpine peaks each December and January, the Bangerang were less mobile than the highland folk and their activities seem to have concentrated on the Murray. Upstream from Corowa there is still a line of rocks running across the river, constituting a largely natural weir, uncovered in low water: this was developed and exploited by the Bangerang to make fish-spearing more efficient.

The dislocation by Europeans of normal Aboriginal routines of life was increasingly severe from the 1840s onwards, but already in the 1830s and probably earlier, European diseases, influenza, smallpox and syphilis, had taken a terrible toll of both Wiradjuri and Bangerang.

In 1845 the census of Aboriginal people in the Murrumbidgee Pastoral District, which included the Murray, estimated the total number as some two thousand. These were precisely located. Those in the Murray heritage region totalled 600: 100 at Thomas Mitchell's station of Mungabareena, later Albury (in Wiradjuri country); 300 at the Gerapthana River, a tributary of the Edward River near Deniliquin, in the area where Bangerang and Narinari met; and 200 at Urana in the centre of Bangerang country (*Historical records of Australia* 1925).

The large middens along the river, on both banks, composed of black wood-ash and burnt clay from cooking, suggested that there had been in the past a higher density of population, although the lack of archaeological dating for the middens does not yet allow firmer conclusions. The largest midden described by Curr was 50 metres in circumference and over a metre high in the centre. But these were almost all deserted, often with trees sprouting from their centre. The middens cannot be quantified, because already in the 1840s Europeans were using them 'as a makeshift for gravel' (Curr 1883:237), but it was clear to a sympathetic observer like Curr that the population of 1,200 Bangerang in his area in 1841 was already greatly reduced from the eighteenth century.

The effect of the European settlement was rapid and profound. Curr had settled on the Victorian side of the Murray opposite the present New South Wales rail-halt of Moira: he tells how in the 1840s the surviving Bangerang 'gave up in great measure their wholesome and exhilarating practices of hunting and fishing, and took to hanging about our huts in a miserable objectless frame of mind and underfed condition, begging and doing trifling services of any sort' (Curr 1883:235). By 1850 Curr believed that only some 80 Aboriginal people survived in the western Murray area.

Those who did not 'hang about our huts' established a considerable reputation as 'scrub-riders and rough-riders': in these activities 'the average Bangerang excelled the average [white] stockman' (Curr 1883:290).

In this intermediate period in the 1840s and 1850s some traditional life still went on, particularly in the backblocks which were slow to attract European settlement. Corroborees continued and were drawn, in a European style, by Tommy McCrae, a stockman who lived in the Corowa area of New South Wales and in Wahgunya on the Victorian side of the Murray (Figure 14). But by the 1870s corroborees were primarily for the entertainment of settlers and groups of Bangerang moved around both north and south of the Murray mounting these paying spectacles (Burton 1973).

Urban Aboriginal people by the 1870s were encountering social problems. The *Corowa Free Press* thundered in its editorial of 14 April 1876 that the Aboriginal people 'are a nuisance here and can well be dispensed with'. In the east the Wiradjuri were encountering similar problems deprived of their river resources, the men forced into

employment on stations or to live in the new towns such as Albury, which still today has a substantial Wiradjuri population. The Wiradjuri and Bangerang women were forced to enter domestic service and become mothers of settlers' children. In the twentieth century, among the Wiradjuri community at least, a high degree of marriage within the linguistic group, to the exclusion of other Aboriginal groups, has helped to restore and foster a sense of identity.

Early European development

After the exploration by Hume and Hovell in 1824, there was about a decade of delay before stock from the settled area in the 19 counties was moved as far south as the Murray region. By 1838 the major route south from Gundagai to Port Phillip followed very much the line of the later Hume Highway through Tarcutta, Little Billabong, Holbrook, Woomargama, Mullengandra and Albury. The first settler in the Albury area, Charles Ebden, took land on both sides of the Murray in 1835 and by the time of Butler's map 3 years later (Figure 15) Thomas Mitchell had acquired Ebden's Mungabareena on the increasingly busy crossing of the Murray where Albury was established in 1839. To the north there were already in 1838 2 large cattle runs: Fowler's at Mullengandra and Father Therry's at Billabong.

To the west Charles Cropper's Brocklesby station at Corowa opened in 1838 as a holding depot for his sheep travelling from Monaro to the Ovens valley in Victoria. Collendina, the neighbouring station to the west, was taken up in 1841 by Robert Brown from Albury.

In the 1840s an increasing number of newcomers came not from the north but from the south, from the pastoral districts of Victoria. By 1850 all desirable water frontages on both sides of the Murray had been taken up. Townsend's survey of 1849 shows very vividly how river-bound these earliest properties were: from the junction of the Edward River with the Murray near Mathura, west to the area round Barham, the river was lined with squatting runs (Figure 16), while the open plain to the north was only notionally divided into undeveloped backblocks.

To the east of Albury, the upper Murray was settled in a similar way in the 1830s and 1840s by such as the Guise brothers at Jingellic or Reuben Sheather and William Guise at Khancoban.

The rivers of the plain had frontages no less attractive than the Murray, though more prone to drought: Benjamin Boyd, the notorious entrepreneur, had over 400,000 hectares round the Edward River at Deniliquin in the 1840s, stocked from Victoria. The Billabong Creek, running west across the plain from Bulgandry to join the Edward River near Moulamein, was fully divided with runs of 20,000 to 40,000 hectares very common, though the Osbornes' Brookong run at Urana covered 112,000 hectares, straddling 2 heritage regions. The runs around Albury were more closely settled with the normal size of runs some 10,000 hectares.

In the mid-1840s, there were throughout this region 'converging streams of settlers moving down the Lachlan, Murrumbidgee, Billabong and Murray Rivers' (Buxton 1967:17), and an increasing number moving north from Victoria. There was a

preponderance of cattle over sheep and the stock was primarily being fattened en route to the Victorian market. In the western area the potential of the saltbush out on the backblocks was not understood (certainly not fulfilled) in the 1840s and 1850s: since saltbush is particularly suitable for sheep, this inhibited the size of flocks and delayed a major wool industry.

Feeding the goldminers

In the 1850s the goldrushes in Victoria and New South Wales greatly increased the demand for beef and mutton: the Murray region was particularly encouraged by the opening of the Ovens goldfields immediately to the south in 1852. The foundation of South Australia in 1836 and the growth of Port Phillip in the 1840s had already given a steady market: now the great increase in rural population created by the goldrushes promised a spectacular increase in the meat market. The Murray graziers responded primarily by increasing cattle numbers: in the entire Murrumbidgee Pastoral District (including the Murray) sheep declined in number by about one-third between 1850 and 1859, while cattle increased two and a half fold to 323,000. The total area grazed by sheep (on the basis that 6 sheep occupy the pasture needed by one steer) was by 1859 only one-third that dedicated to cattle. To control breeding and make handling of stock easier, graziers invested heavily in fencing in these years of high demand for beef. It is in the 1850s that the big stations on the flat plains are partitioned into paddocks and that the backblocks are exploited for the first time. As the *Pastoral Times* remarked in 1859:

> The chief part of this country lying between the Murray and Murrumbidgee will soon be a mass of gigantic paddocks enclosed by strong fences to prevent the escape of store stock placed therein for fattening. At least all the cattle runs will soon be enclosed by strong post and rail fences (cited in Buxton 1967:38).

These 'strong post and rail fences' were increasingly changed to wire in the 1860s as a new profession of fencing contractor took a prominent position in rural areas.

As a result a property like Brookong, at Urana, which had had one paddock covering 45,000 hectares in 1850 had by 1871 12 paddocks each of 10,000 hectares, divided by wire fences (Williams 1978).

The long-distance drovers were affected by the new demarcations. In the 1840s the traditional kilometre-wide stock route could easily expand sideways in unfenced country. Banjo Paterson made the classic statement of this Riverina norm in 'Saltbush Bill':

> And the drovers keep to a half-mile track
> on the runs where the grass is dead
> But they spread their sheep on a
> well-grassed run
> till they go with a two-mile spread.

This legitimate aspiration was much curtailed by the fencing of the paddocks adjacent to the stock routes.

Because of the pressure on country away from reliable water frontages, there was a precocious interest in irrigation. The Yanko canal, opened in 1856 and developed in the 1860s, was built to improve water flow in the creeks between the Murrumbidgee and Billabong Creek north of Jerilderie. The Billabong Creek itself, which is one of the key sources of water, running parallel to the Murray, along the whole western part of the region, was dammed by several aggressive pastoralists, such as Desailly at Coree, creating local bitterness and some violence. Wells and tanks were sunk in the backblocks, pumps were used for small-scale water movement. Some of all this development was in Trollope's mind, as well as the Euphrates-Murray, when he described the Riverina as the 'Mesopotamia of New South Wales' (Trollope 1876 as cited in Jervis 1952:5).

Wool

The huge tracts of country away from the rivers and creeks were opened up more comprehensively in the 1860s when interest throughout New South Wales but most of all in the Riverina turned away from cattle and concentrated on sheep and the wool clip. In the Murray region this was precipitated in 1860–61 by a fall in beef prices (reflected in the creation of boiling-downs, to turn surplus stock into tallow); by a serious outbreak of pleuro-pneumonia among cattle, spreading from Victoria; and by the rise of the river-boat trade (begun only in 1853) to carry wool bales more economically to Victoria, South Australia and overseas markets. From then on, the sheep is the dominant factor in Murray pastoralism, as reflected in the rich heritage of great shearing sheds dating from the later colonial period.

New owners and new settlers changed the order of things throughout the Murray region in the 1870s. Many of the early leases expired in 1866 and, after some bad seasons, 'the seventies, by contrast, opened with good seasons and high wool prices, encouraging men to seek a stake in the land once more. Surplus population spilled into the Riverina from Victoria and to a lesser extent from the older settled areas of New South Wales. High wool prices may have lured men on to the Riverina, population pressure may have pushed them from below, but free selection enabled them to stay' (Buxton 1967:286). And this was very attractive to Victorians and to Germans from South Australia.

The last quarter of the nineteenth century saw therefore an increase in the number of pastoralists, a reduction in the general size of holdings, the increased sinking of deep wells to water backblocks and the complementary increase in the population of the service towns throughout the region. Between 1860 and 1890 the population increased by 600%. As a result there was an intense struggle for land, whether rural or urban and, as Jon Winston-Gregson has shown for Hillside and Little Billabong in Holbrook shire (Winston-Gregson 1984), there were also small nucleated communities which were not viable service centres but which arose out of the severe pressure put on many small free selectors by the larger graziers (Figure 13.5).

Urban development

The towns of the Murray region all took their municipal shape in this period. Albury, the senior and always most important, was surveyed in 1838 and gazetted in the following

year. By 1848 Albury was still of modest size, with a population of 654 and only 12 houses. Eleven years later it was a thriving town with municipal status and a significant newspaper, the *Border Post,* the first in the Murray region. By 1866 it had also the *Albury Banner and Wodonga Express* and 10 hotels. It was surrounded by 20,000 hectares of agricultural land held in small selections: the *Border Post Almanacs* of the 1870s and 1880s are full of advice to agriculturists and gardeners, with advertisements from all the flour mills in the eastern Riverina.

Many of the lesser towns grew up as crossing places on the Murray: Corowa developed in the 1850s as a crossing place, but immediately developed a wharf for the new steam-boat trade in 1854. When the surveyor recommended town status in 1858, he argued that:

> it possesses abundant wharf frontage to a deep portion of the river, with a sufficient breadth of river to turn any steamer now trading or likely to trade upon it (cited in Burton 1973:36).

Moama grew up opposite Echuca, the largest inland port in Australia, and shared in its Victorian neighbour's spectacular success between 1860 and 1900. As a local teacher observed in 1880:

> All business here is transacted with Echuca: the residents of Moama attend Echuca churches, consult Echuca medical men and lawyers, employ Echuca agents, are served by butchers and bakers from Echuca, and purchase all their groceries and household requisites in this place. In fact Moama, though in New South Wales, is merely a suburb of Echuca (cited in Coulsen 1979:47).

The inland crossing places also became towns. Deniliquin started in 1850, becoming a major stock-selling centre in the 1860s and benefiting from a railway to Echuca in 1876. Moulamein was laid out in allotments in 1851 on its strategic position at the junction of Edward River and Billabong Creek, a changing post for Cobb and Co coaches in the 1870s, but, without agriculture, without a railway, without industry to assist, it faded away until its resurgence after 1926. Urana developed in the mid-1860s as a crossroads on drove routes, converging from Corowa to the south, Jerilderie to the west, Narrandera to the north and Wagga Wagga to the north-east. Walbundrie was laid out as a village at much the same time, in 1863, as a useful reserve for travelling stock, but with new selectors, including a group of German settlers, in the 1870s, it began to service a more populous local world as well as controlling an important bridge over Billabong Creek.

In the east part of the region, Holbrook had become a centre for quite intensive agriculture, with a significant concentration of German settlers: when the first land sales took place in 1858, the village was known as 'The Germans', officially changed to Germantown in 1876.

Agriculture

All of these towns, and other settlements, served agricultural farms as well as grazing properties and profited from their needs. While sheep increased in number a dozenfold between 1861 and 1891, the area under crop increased even more from 3,200 to 80,000

hectares in the same period in the Murrumbidgee and Murray regions combined. The Deniliquin, Moulamein and Moama police districts combined had less than 400 hectares under crop up to 1864, and still in 1873 had only 800 hectares sown, but thereafter there was an exponential surge in wheat production, reaching 4,301 hectares by 1878, 9,000 by 1884 and 14,000 by 1889. Similar developments occurred in the east, north of Albury, when the hectares under crop tripled between 1869 and 1889 from 8,600 to 25,000.

The western, drier lands were more vulnerable. Deniliquin lies 'on the fringe of marginal wheat land, where climatic risk is high and yields vary greatly because of drought frequency' (Shaw 1953:32). The output and area under crop continued high in the west in the first 3 decades of the twentieth century, but agriculture was always less important than pastoralism on the saltbush plains.

Irrigation

All this was modified by irrigation. The small size of the agricultural holdings and the emphasis upon wheat rather than livestock created a demand for manmade water channels to assist in stabilising production:

> Greatly impressed by the success (despite initial setbacks) of the fruit settlements of the Chaffeys at Mildura and Renmark. State Governments in south-eastern Australia implemented a policy of establishing numerous closely knit irrigation communities of family farms producing for a distant market. By these means, the frontiers of intensive farming were carried from the humid and sub-humid lands out on to the semi-arid and dry sub-humid interior riverina plains and Mallee country of the southern Murray Basin (Rutherford 1958:237).

The fundamental engineering work was the creation of the Hume Reservoir, damming the Murray upstream from Albury. The agreement of New South Wales, Victoria and South Australia and the support of the Federal government made the Hume Dam a reality, but with very deliberate speed. A conference at Corowa in 1902 led in 1911 to the appointment of engineers who reported in 1913; legislation was passed in all states in 1916–17 and 'the first sod of the greatest water conservation project in Australia' (*Albury Banner and Wodonga Express* 1919 as cited in Swann 1969) was turned by the governor-general in 1919. In 1921 the quarrying plant was erected and a weatherboard village for workmen sprang into life. In 1925 it was decided to generate electricity as well. In 1927 the spillway was partly finished and in 1936 the first stage was completed only 17 years after its commencement. In the 1930s, therefore, irrigation water became available at last.

The form of irrigated farms in the Murray region is very different from the Murrumbidgee. In the Murray region, there was very little intensive, total irrigation of the sort familiar around Leeton and Griffith. Instead the first Irrigation Districts, the Wakool and Berriquin, which opened in 1935 and 1938 respectively, were extensive and partial. Instead of the government resuming large pastoral properties, the aim in the Wakool and Berriquin districts was 'to spread water on large areas of country, without property resumption to provide the maximum number of existing settlers with enough water to irrigate a small portion (initially an average of one-tenth) of their commanded

and suitable lands' (Rutherford 1958:238). Instead of fruit for canning or grapes for wine, the western Murray region was irrigated primarily to ensure a regular supply of fattened lambs: land-use was not made more intensive but the farmer was better insured against drought. The term Irrigation District is in contrast to Irrigation Area: an Area is resumed and redistributed land, a District is simply an existing district with its existing farms and farmers.

The change in cropping came in the 1940s when rice-growing began. In 1949 Tullokool Irrigation Area within the boundary of the Wakool Irrigation District was resumed and redistributed to 24 soldier settlers specifically to grow rice. In the same year the Denimein Irrigation District north-west of Deniliquin received its first water and the large Deniboota Irrigation District to the south-west opened in the 1950s. Now rice is so important a crop that there is a ricegrowers' cooperative mill in Deniliquin. (Figure 19)

Although the farming life in the whole western half of the region has been diversified and made more secure by an irrigated water supply, the ecological effects have been more profound than the flooding caused by the Hume Dam on the Murray and the Stevens Weir on the Edward River. The salinity on the plain has been rising alarmingly, because the watertable has been rising, as much as 25 metres in the last 25 years. The excess water from the rice paddies and from winter rain is now being diverted to the river in a new surface drainage program designed basically to get rid of the water so expensively brought to the Irrigation District in the first place. In the 1970s the salting of the soil was particularly acute in the central part of the Wakool Irrigation District. The result was dead trees, then 'the disappearance of clovers from pastures, then the death of rye grasses with either invasion by such species as barley grass and finally scattered plants of halophytes or complete denudation' (Pels 1975).

Gold

Minerals have not played a large role in the Murray region. Goldrushes have been restricted affairs and success has been modest.

Reefs were identified in 1855 at Bulgandry, 70 kilometres north-west of Albury, and mining went on intermittently for an initial 40 years. In 1896 Bulgandry was still a small mining town: its Working Man's Club had 100 members, there was a public school under construction, 'a commodious hotel' and an 8-head stamp battery (*Border Post* as cited in Williams 1978:35). In 1898 a new reef was discovered, new shafts were sunk, new miners came, the Working Man's Club had 250 members, the 8-head battery gained 2 heads and a new 5-head battery was erected. But the expectations were not fulfilled and Bulgandry quietly declined: the soldier settlers on the former Bulgandry station in the 1920s did not save the town and when Rand was created on the railway 6 kilometres away in 1926 Bulgandry withered to a mere 3 houses.

To the south, at Albury, there was some goldmining between 1860 and 1865, on the Black Range and after 1863 on Nail Can Hill. The Black Range area, north of the town, had been unsuccessfully explored in 1851, but 200 Chinese and some Europeans found both alluvial and reef gold. As Dr Andrews laconically remarked in 1912, 'from that time "fossicking" has always been carried on, whenever water was available, but no fortunes

have ever been gathered there' (Andrews 1912:43). Nor was any fortune made from Portuguese Gully to the north-west.

In October 1863 a new rush began on Nail Can Hill, in North Albury. The reef was mined off and on. In 1881 a new company found a new reef and work continued until the late 1890s. The site has been neglected in the twentieth century but is now publicised by the Crown Lands office's Nail Can Hill walking trail.

Further down the Murray, at Corowa, there had been hopeful enquiry ever since the Rutherglen goldfield in Victoria found such good deep leads in the 1860s: did these leads go under the Murray and under Corowa? A shaft was optimistically sunk at Corowa in 1876 but nothing really happened until 1892. Then there was a rush to Quat Quatta station just to the east, with many Chinese arriving and then, as Quat Quatta failed, 11 bores were sunk in 1893–1894 at Corowa itself. An optimistic 8-head stamp battery was erected and in 1897 the Corowa Deep Lead Co brought in machinery, sank 2 shafts in 1900 and collapsed in 1904. A syndicate opened the well-named Corowa Perseverance mine in 1916 but closed the mine in 1919, while a final shaft sunk in 1930 was flooded by seepage before 1931 was out. Although a fair amount of mess was created, few profits were made, even by the Chinese. In 1932 in the final throes of gold fever a company went back to the alluvial field at Quat Quatta and installed a dredge, but this too failed.

In Tumbarumba shire on the north-east edge of the region there was a long history of gold winning, both alluvial and shaft. The area from Tumbarumba north along Tumbarumba Creek extended to Laurel Hill and constituted part of a wide goldfield area encompassing Adelong and Batlow in the Murrumbidgee heritage region and Kiandra in Monaro.

Gold was first discovered near Tumbarumba in 1855 and for the next few years a highly mobile mining community explored the adjacent area. JL Willis has noted how 'the town of Tumbarumba virtually had no fixed location. It followed the gold miners as they moved down Tumbarumba Creek working the alluvial gold' (Willis 1972:1). The town finally settled down on its present site in the mid-1860s, at the most southerly point of the goldfield.

The deep lead running north from Tumbarumba was exploited by shaft mining from 1856 until 1937 but very little gold was extracted after 1884, despite the floating of some companies over the next 20 years and a flurry of unsuccessful activity between 1935 and 1937 on the Yarrara and Nevada reefs. Reef mining was never more profitable than alluvial mining, though in the late 1870s the quantity of gold extracted from the quartz approached the total alluvial gold recorded. Thereafter alluvial gold maintained a complete dominance. More than 1,000 ounces of alluvial gold were obtained from Tumbarumba Creek and its tributaries in every year from 1889 until 1906 and declined only after 1910 to nothing at all from 1919 to 1921, but revived from 1922 until 1926 and again in the early 1930s.

After the technique of dredging was introduced from New Zealand in 1899, dredges were extensively used on the creeks from 1900 until 1916, producing more than 1,000

ounces in each of the years from 1903 to 1907. Only one bucket dredge was employed on this field: all the others, operated by the Burra Sluicing Co, the Union Jack Gold Mining Co and some individuals such as the Heineckes, JJ Donaldson and MD Bennet, all operated by pumping and by hydraulic jack elevators.

Conclusion

The Murray has relied heavily on the graziers. The area first developed as a holding paddock for stock moving south to Victorian markets. In the 1850s the goldrush population created a market for beef which encouraged cattle breeding, but in the 1860s cattle disease and low prices for beef led pastoralists to concentrate more on sheep and fine Merino wool became the dominant feature, commemorated in the Peppin Merino Stud Memorial at Wanganella and perpetuated at studs such as Boonoke near Conargo. With a vigorous steam-boat trade on the Murray after the mid-1850s and a rail link to Melbourne via Echuca, the wool clip was assured of easy transport to its markets. In the period from 1870 onwards, with closer settlement, grain production became increasingly important and in mid-to-late twentieth century irrigation channels to assist farmers on the drier lands in the west have both increased wool production and diversified cropping, with a heavy price to pay in increasing salination around the Wakool. Only at Tumbarumba has goldmining attained a position of any significance.
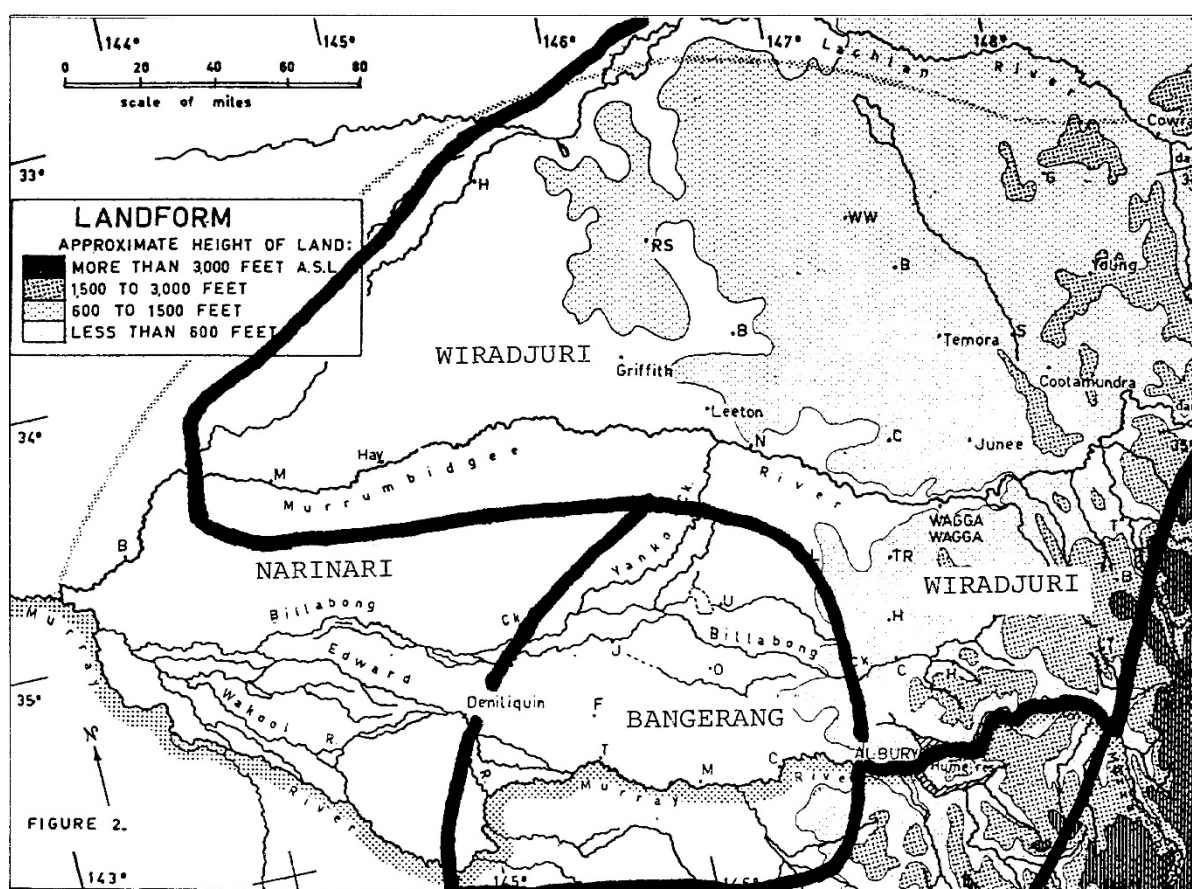
Figure 13   **The approximate locations of the 3 Aboriginal groups in the Murray region: the Wiradjuri to the east, the Bangerang in the middle (straddling the river Murray) and the Narinari in the west**
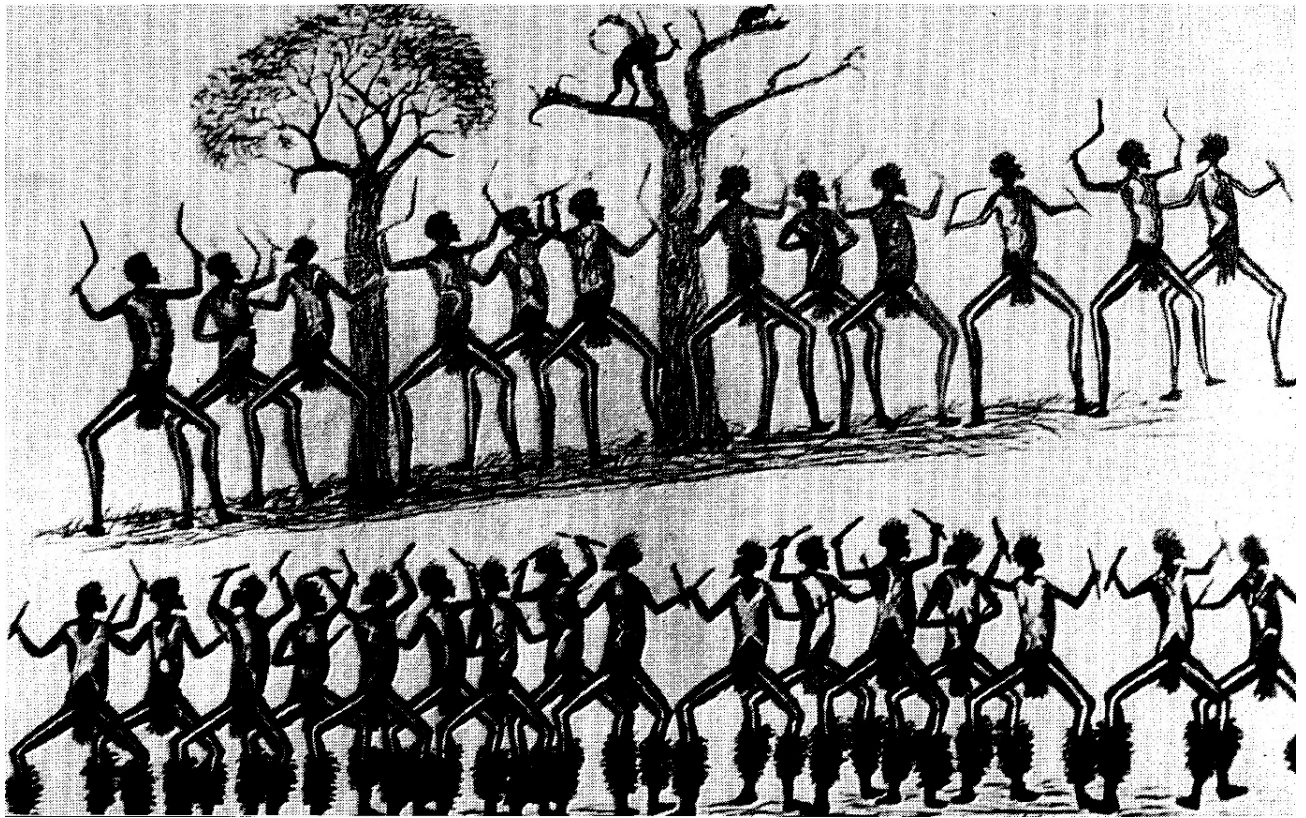
Figure 14   **Showing a corroboree of the Bangerang people and, at centre top, a traditional scene of the pursuit of a possum up a tree. The axe in the hunter's hand seems, however, to be European. Drawing by the Aboriginal artist Tommy McRae of Corowa and Wahgunyah (d.1901). Source: Brian Burton 1973: *Flow gently past: the story of the Corowa district*, Corowa, p 53**

Figure 15   HC Butler's map of the South Road from Gundagai to Wodonga in 1838. An explanatory version is on the right. The northern boundary of the Murray heritage region lies between Billabong and Kyeamba. Source: Margaret Carnegie (1973) *Friday Mount: first settlement at Holbrook and the south-western slopes of New South Wales*, Melbourne, p 93
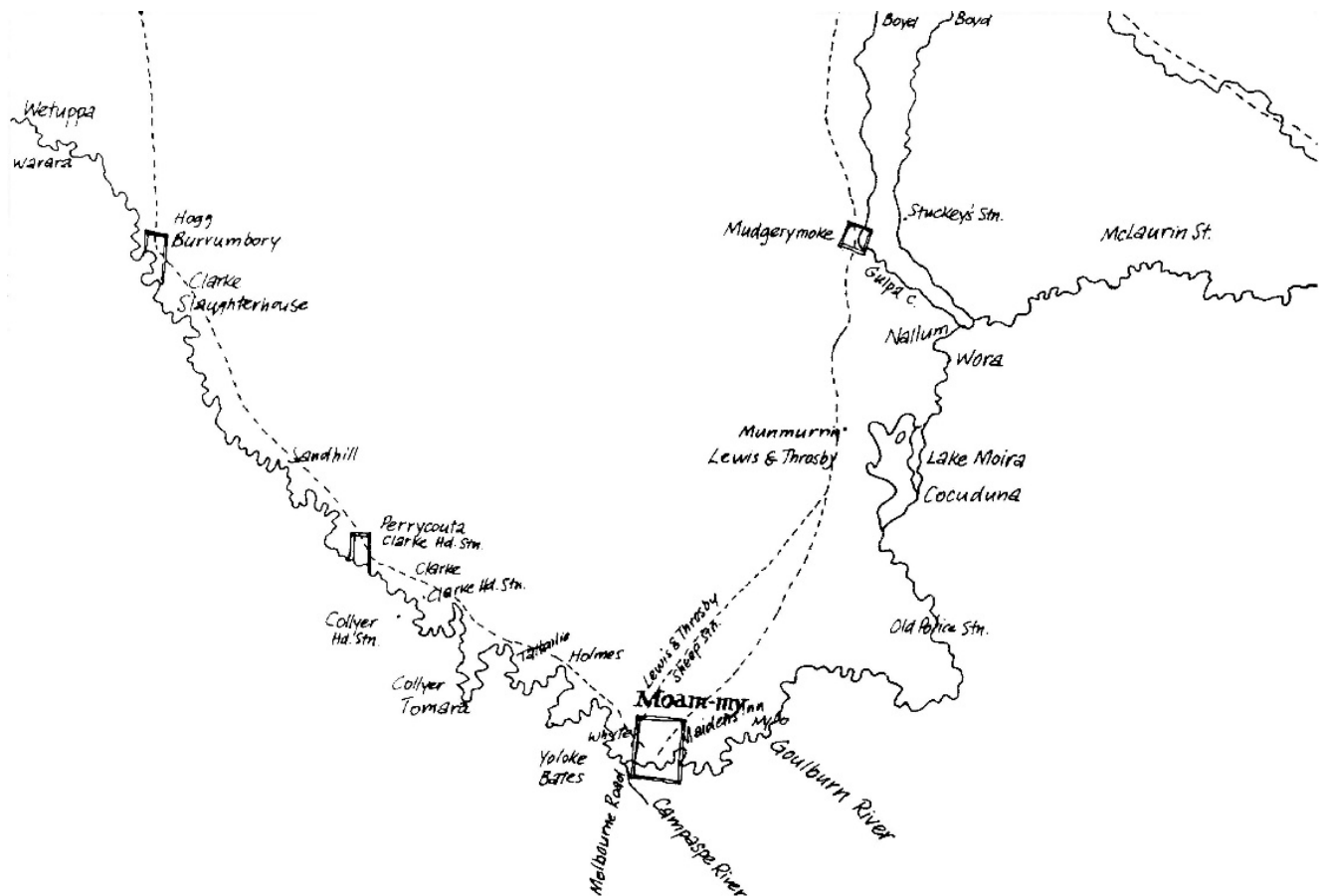
Figure 16   **Helen Coulson's plan of the same area showing the underdeveloped back blocks. Source: Helen Coulson (1919)** *Echuca-Moama,* **Red Cliffs, pp 90–91**

Figure 17 Surveyor Townsend's map of the Murray runs from Mathoura westwards in 1849. Source: Helen Coulson (1919) *Echuca-Moama,* Red Cliffs, pp 90–91

Figure 18 Hillside, 1866 to 1886. The constriction of the free selectors (hatched) by the 2 large graziers, Ross and Manning. Source: JH Winston-Gregson (1984) 'People in the landscape: a biography of two villages', *Australian Journal of Historical Archaeology,* 2:30
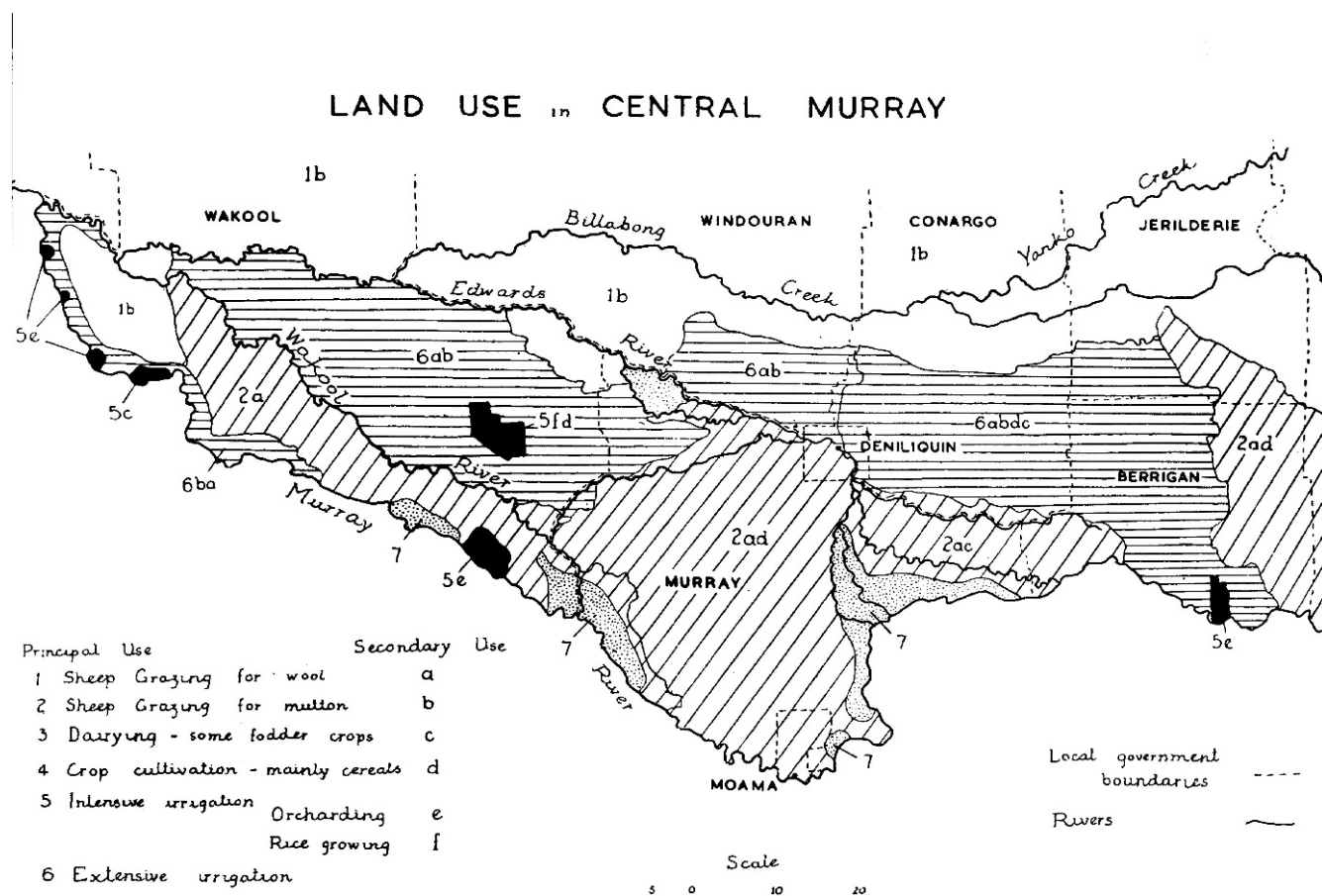
Figure 19 Land use in the western part of the Murray Region in 1953. Source: JH Shaw (1953), 'Land use in Deniliquin region', *Australian Geographer*, 6:2, 35

14. South Coast

There is no continuous coastal plain, rather a series of valleys containing settlement separated by ridges and plateaus of wooded country. While spurs from the plateaus reach the coast, most of the higher land has been eroded to a low level. There is much high and rugged country separating the coastal valleys from the plateau of Monaro which is reached by the Brown Mountain road.
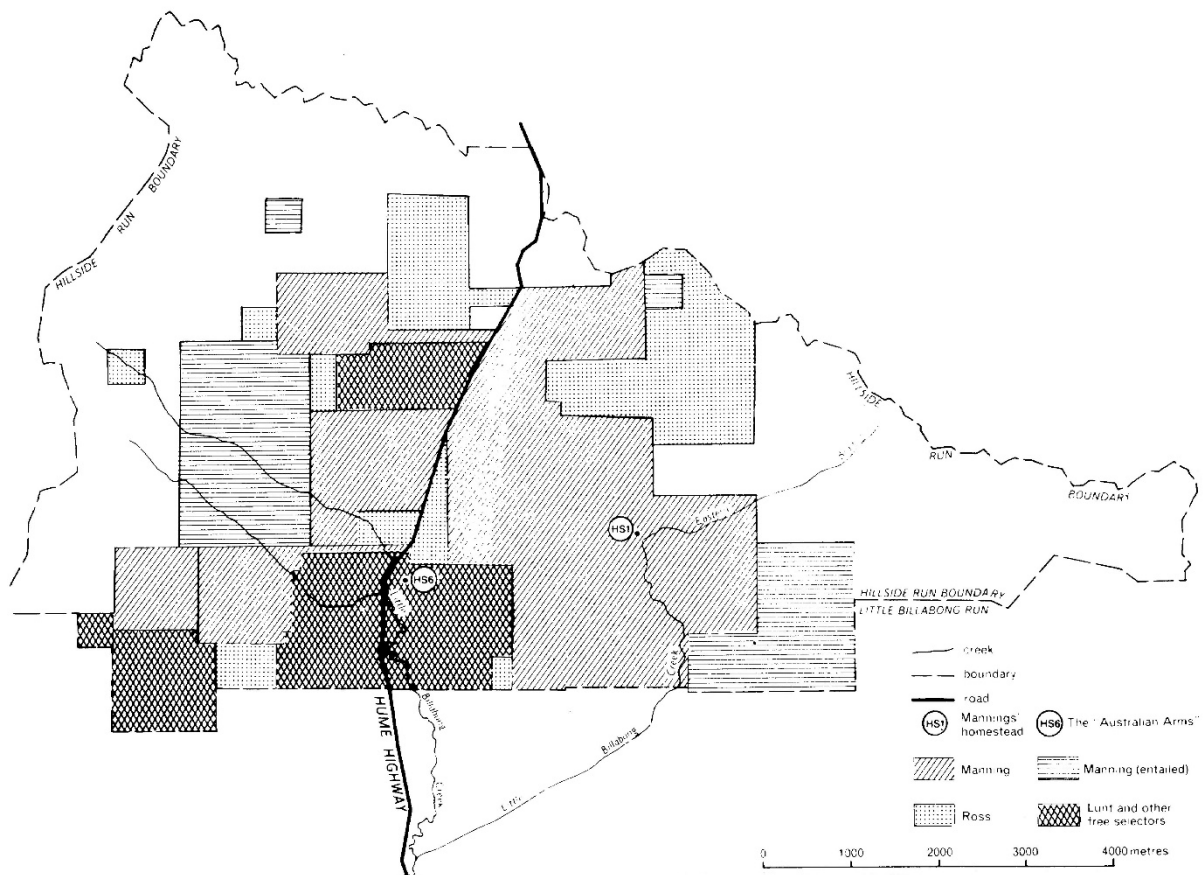
River basins extend from Batemans Bay to Cape Howe and are smaller than equivalent valleys on the north coast, though the Bega Valley is of considerable size. Small harbours string the coastline: Batemans Bay, Tuross, Narooma, Eden. The Bega Valley port was at Tathra Wharf. Settlement came chiefly from the sea, or by movement down from Monaro.

While small patches of rainforest exist, this has not been an important resource. Otherwise, eucalypt forest has been of great importance in fostering a timber industry, notably messmate, blackbutt, grey gum and white ash. There are significant wetlands.

Dominant land use has been dairying, with cheese manufacture particularly important in this region, though more butter than cheese was always made. Pigs, maize and sorghum have also been important, as has fishing.

Local government areas

Bega Valley, Eurobodalla.

Map 20   **Local government areas and boundaries of the south coast historic region**

Aboriginal people

The south coast offered abundant food supplies both from the sea and the land. The valleys of the Moruya, Tuross, Bega and Towamba rivers were divided by dauntingly steep forested hills and formed natural drainage basins. The western boundary of these basins was the watershed of the Great Dividing Range.

This coastal area was occupied by a fairly high density of Aboriginal people, the characteristic 'Katungal' as opposed to inland and mountain dwellers. The drainage basins of the Towamba and Bega rivers were precisely the territories of the Taua and Djiringanj groups respectively; and in the north of the region the Walbanga occupied the whole of the valleys north of the Tuross and the Moruya rivers. The only parts where drainage basin did not coincide with occupation by a single Aboriginal group were the 2 parallel basins north of Batemans Bay, where the Wandandian and Walbanga border seems to have cut right across the basins from east to west (Figure 20). Essentially, however, there were 4 main waterways with their valleys and tributary systems, and there were 3 Aboriginal groups, one of them occupying 2 natural basins. All of them were hemmed in by the mountains to the west and, although they joined with inland Aboriginal people in periodic meetings, were characteristically coastal in their lifestyle (Flood in Bowdler 1982).

The density of population was almost certainly higher than on the tablelands and inland plains. Two archaeologists, Phil Hughes and Ron Lampert, have concluded that over the 5,000 years before 1788 there was 'a progressive increase in the number of sites becoming archaeologically visible (two to three fold) and an increase in intensity of occupation of those sites already visible (six to ten fold)' (Hughes and Lampert in Bowdler 1982:20). Hughes and Lampert were assessing sites from as far north as Sydney down to the south coast but the more detailed identification of Aboriginal sites from Durras Lake (just north of Batemans Bay) down to Bermagui undertaken by Margery Sullivan has shown a very high incidence of coastal occupation round Batemans Bay, on the Tomaga estuary, in the kinks of the Moruya River, around Tuross Lake and Heads, and on the coast between Dalmeny and Bermagui (Figure 21). (Sullivan 1976)

Because of their relatively small traditional lands and the regularity of food supplies, these people of the south coast were much less mobile than the Aboriginal people of the interior regions away from major rivers. Nonetheless when George Bass explored Tuross Lake in 1797 he did not see any Aboriginal people, because they had all prudently gone off south-west to the Bodalla area. The first contact between Europeans and Aboriginal people on the south coast was in 1798 when Matthew Flinders landed at Snug Cove in Twofold Bay (the site of Eden) and had an amiable exchange of snacks with a middle-aged Aboriginal man. Flinders gave the Aboriginal man a ship's biscuit and received in return a piece of whale fat: 'this I tasted', Flinders confided to his log, 'but watching an opportunity to spit it out when he should not be looking, I perceived him doing precisely the same thing with our biscuit, whose taste was probably no more agreeable to him than his whale was to me' (Flinders cited in Wellings 1970:11–12).

Subsequent meetings between the local people and Europeans less intelligent than Flinders led to violence at Snug Cove in 1803 and Batemans Bay in 1808 and 1821. As the cattlemen began to bring their herds south in the later 1820s and established permanent settlement in the more favourable sites through the 1830s and 1840s, the Aboriginal people's coastal life was increasingly disturbed and their foodways disrupted. Disease took its usual toll, though when John Harper met a group of 146 Aboriginal people at Batemans Bay in 1826, he regarded them as not yet 'contaminated' (cited in Gibbney 1980:18). The 1844 census shows a population of 535 with a high concentration in the Bega Valley: only 34 were counted around Moruya, 69 in the stretch of coast from Narooma to Murrah (below Bermagui), 82 at Twofold Bay and 19 at Pambula. On the other hand births were balancing deaths and the Aboriginal population was reported to be quite stable in the mid-1840s (*Historical records of Australia* 1925).

Censuses are uncertain things. At the time that John Lambie was counting only 34 Aboriginal people at Moruya, the first newcomer girl there thought that 'the Aborigines numbered about four hundred. There were no other white children but my brother and myself, and we used to play with the blacks, and were never frightened by them' (Rose 1923:375). But as Celia Ann grew up in Moruya and became Mrs Rose, she saw the first hotel constructed: in her extreme old age, she naively recalled that 'when the blacks got drunk there they would fight and kill each other, and now [1923] there is not one full-blooded black left in the district' (Rose 1923:375).

In the 1840s many of the Aboriginal men worked at sheep washing and as agricultural labourers, while the womenfolk worked as domestic servants and too often bore settlers' children. The steady disintegration of traditional society was completed by the more intensive European exploitation of all the best land and all the best fishing in the mid-colonial period. In one European industry, however, the Aboriginal people played a significant role: throughout the main whaling period from the 1830s until 1920, Aboriginal men constituted a reliable, able and essential pool of labour for the whaling stations of Twofold Bay. Such economic assimilation did nothing to abate the disruption of their traditional lifeways, and the incidence of syphilis was very high, but the excellent relations between Aboriginal people and Europeans in the whaling industry did mean 'that the local groups escaped the decimation which accompanied the progress of the pastoral frontier and enabled a certain continuity of traditional culture and social structure to be maintained' (Pearson 1985:20).

An archaeological challenge is presented by the lack of written evidence about the material culture of these Aboriginal whalers and the Aboriginal women who lived with the European whalers at the same sites. Twofold Bay has quite exceptional potential as evidence for the acculturation of Aboriginal lifestyles and technology in an unusual and specialised environment.

Whaling

The whaling stations of Twofold Bay constitute one of the principal heritage resources of the south coast. They are exceptional in 3 ways: their continuous existence for over a century; the assimilation of Aboriginal people into the introduced workforce; and the

integration of whaling with conventional agriculture and pastoralism. At the same time, the whaling operations are part and parcel of a universal nineteenth-century industry. Throughout the Pacific, from Tasmania, New Zealand, Norfolk Island and California, in the Atlantic from the West Indies and New England, and in the Indian Ocean from South Africa, open boats ventured out from land-based stations to harpoon whales, tow them back to land and there render down the blubber into oil.

Clearly the Aboriginal people of Twofold Bay were already familiar with whales in the eighteenth century, although they may perhaps only have eaten ones cast ashore. The Aboriginal man who gave Matthew Flinders a piece of whale gristle in 1798 committed a prophetic act quite unwittingly. Whaling in the colonies was discouraged by heavy British tariffs until 1823 and, although there were stations in Tasmania during the tariff period, the Australian mainland industry began in Twofold Bay in 1828. Thomas Raine's enterprise lasted only 3 months in 1828 but whaling continued on an ad hoc basis and in 1834 the Imlay brothers began the really significant operations in the bay.

Alexander, George and Peter Imlay had in the years 1832 to 1835 established a large pastoral enterprise right down the south coast from Bega in the north to Cape Howe on the Victorian border. To the Imlays whaling was only one aspect of a diversified economy. They had their own ships and also used William Walker, the major Scottish shipping firm in Sydney, as their agents. These coastal ships transferred cattle, beef, tallow, horses, wool, wattle bark for tanning, whale oil and whalebone from Eden to Sydney right through the Imlay period, which ended in 1847.

Unlike Tasmanian stations, which seem to have overkilled the whale population, Twofold Bay continued to expand its whaling business up to the late 1840s. The flamboyant entrepreneur Ben Boyd created a whaling station in 1842–43 as part of his grand scheme to have his own coastal base for shipping out his wool and cattle from the million hectares of pastoral land he held in the Murrumbidgee and Monaro regions. Boyd's famous whaling station at East Boyd Bay was therefore, like the Imlay works, a cog in a much bigger wheel.

Despite the falling numbers of whales in the area exacerbating the decline, 2 other whaling stations opened in East Boyd Bay just south of Ben Boyd's: one was owned by the Imlays, the other by Barclay and Faulkner. Competition was intense and a high lookout point was needed. The Imlays had a very successful tower on Lookout Point at Eden and Boyd constructed one on Honeysuckle Point north of East Boyd Bay, but the famous surviving tower was farther east at Red Point: this impressive sandstone tower was conceived in 1847 as a lighthouse but because the light could not be maintained constantly Boyd was obliged to use the building as a lookout only in the brief period before the collapse of his business empire in 1848–49.

To intercept the whales as they migrated northwards, George Imlay established 2 whaleboat stations (without an oil-processing plant) farther south at Mowarry and Bittangabee (Figure 22). This reflected the keenness of competition in the early 1840s: the surviving stone building, begun in 1844 at Bittangabee, suggests that Imlay was contemplating a full-scale whaling station there but the recession created general problems for the Imlay brothers and the building was not completed. Boyd then gained

control of both Mowarry and Bittangabee in 1847–48, but the decline in whaling was not arrested.

In East Boyd Bay only the Barclay and Faulkner station survived and did not close until the 1870s. The Walker firm of Sydney and a man called Solomon seem to have continued the Imlay station at Eden into the 1860s and a new station on an entirely new site was opened about 1861. This was Alexander Davidson's station on the east side of Kiah Inlet on Twofold Bay (Figure 22). Davidson's station had a remarkably long history: utilising Boyd's stone tower on Red Point and employing largely Aboriginal crews, Davidson continued open-boat bay-whaling up to 1929, together with a traditional try-works for boiling down the blubber. This last of the old-style whaling stations is vividly described by a well-informed eyewitness, WJ Dakin in his *Whalemen Adventurers* (Dakin 1934).

The historical and evidential importance of the archaeological sites on East Boyd Bay, in Kiah Inlet, at Mowarry and at Bittangabee deserves equal recognition, not least for the unique information archaeology can give on the lifestyle of the Aboriginal whalers.

European land settlement

As elsewhere to the south of the 'limits of location', the south coast attracted settlers from the 1830s onwards seeking new, free pastures for their cattle and sheep. The first pastoral runs in Moruya were taken up in 1828 and 1829, although initially overseers and a few stockmen were the only residents. The first owner-occupiers came in 1829–1830, with Francis Flanagan at Mullenderra and John Hawdon on the Moruya River (where his 1835 cottage still stands). These settlers had come from the north. An increasing number came from the Braidwood district to the west, especially after the major drought there in 1833. Well-known Braidwood families such as Elrington and Tarlinton established coastal runs near Cobargo, while the Imlay brothers from Tasmania acquired large pastoral runs from Twofold Bay south.

Settlement was patchy because of the rugged nature of the country which separated the river valleys.

Within the Bega Valley the new settlers, principally from Braidwood, found the open savannah-woodland fed by apparently reliable mountain streams very attractive for sheep-grazing: the critical advantages were good water and natural grassland. The settlers from Braidwood and the Imlays from Tasmania met by 1834 in the area south of Bega. The Imlays and their associates, the Walkers, had turned Towamba valley to the south of Eden into a well-stocked cattle and sheep run; in the north, in Bega Valley, they began to develop Kameruka, the most potent of all the south coast properties.

All this became regularised after 1846 when the new County of Auckland was proclaimed, extending from the Brogo River in the north down to the Victorian border. When the county was declared there were only 1,000 people in the area. In Bruce Ryan's words, still in 1850:

> the cultural landscape of the Far South Coast consisted of little more than Eden, the ghost of Boydtown, ridge-top bridle tracks, clusters of shepherds' huts on a few hilltops, some

> wheat fields associated with the Bega homesteads, and the occasional stockyard and stone-walled sheepfold (Ryan 1964:108).

Over this undeveloped landscape the Scottish Walkers hunted native dingoes and imported foxes with their packs of imported hounds.

Pastoral developments

The creation of the Twofold Bay Pastoral Association brought substantial Sydney investment to the south coast after 1852. Consisting of 3 Mannings, 2 Tooths, John Croft and Thomas Sutcliffe Mort, the Twofold Bay Pastoral Association gradually bought all the Imlay-Walker holdings on the south coast and began the consolidation of Kameruka (Figure 23).

The Association was dissolved in 1860, but individual members retained critically important parts of the land: Thomas Sutcliffe Mort transferred his interests north to the Tuross valley where he acquired Bodalla from John Hawdon, but the Mannings and the Tooths dominated Bega Valley and Towamba Valley. The Mannings soon sold out to the Tooths and by 1864, Robert Lucas Tooth was the leading figure in establishing pastoral policy on the far south coast. Tooth, like his uncle Frederick Tooth from whom be acquired Kameruka in 1864, had the massive capital of the Sydney breweries behind him and over the rest of the nineteenth century the deeply held ideology of the Tooth family left a lasting impression on Kameruka, just as Mort's beliefs did at Bodalla and Comerang. These properties were created by a characteristic mid-nineteenth century vision of social ideals, humanitarian absentee landlordism and landscape gardening.

Landscaping

Exotic grasses were planted at both Kameruka and Bodalla in the 1860s and 1870s. At Comerang Mort insisted that no trees should be ringbarked but that substantial groves of trees for summer shade should stand in every paddock: clearing was done by removing trees down to the roots and replanting of grass was carefully done (Barnard 1961). At Kameruka, Robert Lucas Tooth surrounded the attractive Walker homestead 'with English laurels, Chinese elms, firs, oaks, cypresses, bunya-bunya, acacias and ornamental shrubs' (Ryan 1964:112). The ideological commitment to well-housed tenant farmers created at Kameruka 6-roomed slab cottages (replaced by weatherboard in 1911) and at Bodalla and Comerang well-ordered farmhouses full of tenants hand-picked by Thomas Mort. Hawthorn hedges became a hallmark of Kameruka. The planned village of Bodalla with its public hall, reading room with improving books, company office, bakery, store, smithy and company carpenter's shop signally lacked an inn until Mort in 1874 was obliged to withdraw his total ban on liquor (cf Barnard 1961).

Dairying

All this physical manifestation of social engineering was accompanied by a decisive swing away from pastoralism for wool and beef to the dairying which became the hallmark of the south coast in general but Bega Valley in particular.

Drought and an outbreak of pleuro-pneumonia among cattle in the mid-1860s greatly reduced the number of beef cattle in the area. At Bodalla, Mort replaced these losses with dairy cattle instead. Mort took a firm control over the type of livestock and his tenants' cattle-breeding programs; the Illawarra Shorthorn, the Friesians and the Jerseys which became characteristic of the south coat in the twentieth century were introduced at Comerang and Bodalla in the 1870s. The first really large milking sheds were erected at Comerang, bailing 60 cows. Different breeds were carefully separated and their milk then blended in a series of experiments to improve the quality of butter and cheese.

Whey, which is a by-product of cheese-making, was used at Bodalla to fatten pigs and in 1873 Mort built a bacon factory (still standing on Holme Farm at Comerang): with specialised equipment, specialised personnel and carefully bred Berkshire and Albert pigs, the bacon products from Bodalla were a model for the entire south coast. Although Mort died in 1878 and his estates passed through the hands of trustees into company hands with attendant subdivision of Bodalla into 13 leasehold farms, the cheese and bacon factories remained with the family company until it merged with the Bodalla Co-operative Company in 1923.

Similar developments occurred at Kameruka in the 1870s as Robert Lucas Tooth consolidated his land holdings and turned to dairying: the change was a few years behind Mort, however, and Tooth's manager bought his last major stud bull for beef cattle as late as 1873. Over the late 1870s, however, 6 dairy farms were created out of this central portion of Kameruka and Tooth introduced the new technologies of cream separation and the Babcock tester in 1886 and 1892. By 1904 he had created 8 more dairy farms in the Bega-Bemboka valley, with a reputation equal to Bodalla for the quality of the milking cattle and the quality of life for the tenantry.

The rest of the Bega Valley turned to dairying in earnest in the late 1880s, after the drought broke in 1886. Already in the late 1870s small private cheese factories had opened at The Island (at Kameruka), Wolumla, Elm Grove and Tarraganda, but the first 2 catered primarily for Tooth's Kameruka milk and it was only when a larger number of farmers moved over to dairy cows in the late 1880s and 1890s that the butter and cheese industry really developed in the valley at large. The first big dairy factory was founded in 1894 at Yarranung, just north of Bega. This factory, operated by the NSW Creamery Butter Co. survives as a storage shed on a dairy farm today and has an importance just as great in its way as the more attractive buildings at Kameruka and Bodalla. This new company 'revolutionised the dairying industry in the district' and there were soon new factories at Bega, Mogilla and Cobargo as well as 14 auxiliary creameries (*Bega Standard* 1899 cited in Codrington 1979:34).

A new and highly significant element also appeared in the dairying scene. Factories run by farmers' cooperatives had first appeared in the Illawarra in 1883. The first cooperative butter factory on the south coast opened at Wolumla (inland from Merimbula) in 1887. During the 1890s 2 other cooperative butter factories opened at Candelo and West End (near Mogilla) but more importantly cooperative cheese factories appeared, first at Tilba Tilba, Central Tilba and, in 1900–01, at Bega and Cobargo. By

1903 all non-cooperative butter factories in the Bega Valley had closed except Kameruka (though Bodalla in the Tuross Valley did not become a cooperative until 1923).

In the Bega Valley the number of dairy farmers supplying the cooperative factories had grown rapidly to 110 in 1901 and to 162 in 1902, although the number then stabilised. The economic basis, and the way of life of the farming community, had changed dramatically over the previous 20 years. The local paper, the *Bega Standard,* indulged in complacent self-congratulation in 1902:

> … Bega is a paradise. Abundance of grass waving in the paddocks like a crop of oats; stock in splendid condition; cows giving big yields; good crops; the happy faces of the farmers who are drawing large cheques on the tenth of every month for their cream and milk supplies to the factories (*Bega Standard* 1902 cited in Codrington 1979:43).

The brand names of south coast cheeses became widely known and respected – Jellat, Kanoona, Elmgrove, Warragaburra, Kameruka – just like the Bega Co-operative butter brands, Burrawang, Bega and Merriga. By 1900 half of New South Wales' cheese came from the Bega Valley. But little remains of these early cheesemaking buildings since the tiresome insistence of the Dairy Industry Act of 1915 on hygiene and quality testing resulted in the replacement of most of the early factories: Bega Co-operative's wooden factory of 1900, for example, was pulled down and a new brick and concrete building erected in 1924. The factories built in the early twentieth century had been very numerous: in 1917 there were no fewer than 47 cheese factories (only one cooperative) and 7 butter factories (all but one cooperative) (Codrington 1979) (Figure 24)

The number of cheese factories contracted in the 1930s and by 1942 there were only 7 in all, 3 of them cooperative (ABC at Central Tilba, Tilba Tilba and Erinna). This apparent contraction is, however, misleading. The expansion of the milk market to Canberra in the 1950s and the ending of the milk-zoning regulations in 1977 gave Bega Valley new markets and new energy, with an increased production of milk and a mass market for packaged cheese. The dairy had been transformed from a small farm operation, through technological advances and the rapid expansion of cooperative entrepreneurship, into a highly successful modern business undertaking.

Table 7   Bega Valley Butter factories 1917

Number	Name	Town
1.	Bega Co-operative Creamery co Ltd	Bega
2.	Bemboka Co-operative Butter Co Ltd	Bemoka
3.	Candelo Co-operative Dairy Co Ltd	Bimbaya
4.	Cobargo Co-operative Butter Factory	Cobargo
5.	Home Farm Butter Creamery	Kameruka
6.	South Wolumla Creamery Co Ltd	South Wolumla
7.	West Enda Creamery Co-operative Co Ltd	Morans Crossing

Table 8   Bega Valley cheese factories 1917

Number	Name	Town
1.	ABC Dairy Factory Co Ltd	Central Tilba
2.	Angledale Cheese Factory	Angledale
3.	Ayrdale Cheese Factory	Wolumla
4.	Barrabooka Cheese Factory	Tanja
5.	'Briandery' Factory	Bega
6.	Bright Hills Factory	Candelo
7.	Buckajo Cheese Factory (TJ Bateeman)	Buckajo
8.	Bugle Factory (William Spence)	Bega
9.	Curtis, Walker	Brogo
10.	Deep Dene Factory (Mrs A Targett)	Tantawanglo
11.	Distant view (Mrs D, Sercombe)	Tanja
12.	Elmgrove Factory (Geo Guthrey)	Bega
13.	Erinna Co-operative Cheese factory Ltd	Bega
14.	Essex Hill Factory	Tanja
15.	Fairfield Factory (JJ Brown)	Quaama
16.	Fernlee Factory	Bimbaya
17.	Jellat Jellat Cheese factory	Bega
18.	'Kaewieng' Factory	Bega
19.	Kanoona Factory	Bega
20.	Lake View (Isaac Game)	Wallagoot
21.	Lake View (FH Anderson)	Bergalia
22.	Lane's XXX Kameruka	Candelo
23.	'Mayfield' Factory (FM Du Ross)	Bergalia
24.	Meringlo Factory (Catherine Rheinberger)	Meringlo
25.	'Mountain View' (HJ Bate)	Tilba Tilba
26.	Mountain View (Wm Jauncey)	Bega
27.	Murrah Cheese factory (Edgar O Gowing)	Murrah
28.	'Niagara' Cheese Factory	Kameruka
29.	'Oaklands' Cheese Factory (Jas Jauncey)	Bega
30.	Orion Cheese Factory (Est late P Hergenham)	Bega
31.	Pidgeondale Factory (T Wilson)	Quaama

Number	Name	Town
32.	Ritchie, HB 'Limegrove' Factory	Tanga
33.	Ritchie, HB 'Hillsdale' Factory	Tanja
34.	Ritchie, HB 'Penuca' Factory	Bega
35.	'Rose Brook' Factory (Lucas Bros.)	Candelo
36.	Schomberg, O'Broadview' Factory	Brogo
37.	'Springvale' Cheese Factory (EH Filmer)	Candelo
38.	Springhill Factory (EE Gilkes)	Tilba Tilba
39.	Stiles, EF	Bega
40.	'The Island' Cheese Factory (Kameruka Est.)	Bega
41.	The Meadows Cheese Factory (D. Gowing)	Bega
42.	View Mount Factory (J & T. Walsh)	Verona
43.	Wandella Cheese Factory (John McVeity)	Wandella
44.	Wangruka Cheese factory (JG Boxsell)	Cobargo
45.	Wattalia Factory (Walter Dalton)	Tathra
46.	'Wolumla' Cheese Factory (Kameruka Est)	Bega
47.	Yarranung Cheese Factory (Est Late PH Wood)	Bega

Ironically, the 2 model estates of Kameruka and Bodalla, redolent of colonial perceptions and paternalism, are the best known part of the dairying heritage of the south coast.

Coastal shipping and shipwrecks

Because of the extreme difficulty posed by the coastal roads, coastal shipping remained for over a century the main line of communication for south coast farmers. No railway was ever built in the area, so shipping remained unchallenged for a remarkably long time. The critical stage in establishing a regular steamer service between Sydney, the south coast and Melbourne came in the 1850s. The Kiama Steam Navigation Company, formed in 1852, amalgamated with the Wollongong, Kiama and Shoalhaven Steam Navigation Company in 1857–58 to form the Illawarra and South Coast Steam Navigation Company. This major company, which closed only in 1948, operated initially through Merimbula, Eden and Bermagui. Kianinny Bay, north of Tathra, had a small wharf so that lighters could take passengers and cargo out to join the Illawarra company ships between Merimbula and Bermagui.

This was not satisfactory for the settlers in Bega Valley and the deepwater wharf at Tathra was constructed in 1861–62 specifically to service Bega Valley: simultaneously a reasonable road from Bega to Tathra was constructed. The great timber jetty at Tathra remained the essential lifeline for the Bega Valley pastoral and then dairy industry in the modern period: the last cargo boat steamed away from Tathra wharf only in 1957, 30

years after the last passenger boat, the *Merimbula*, was wrecked on the Illawarra shore. The wharf had, of course, been much repaired: most of the timbering had been renewed from time to time and was extended 4 times between 1873 and 1889 and again in 1903 and 1912. It remains today a wonderfully evocative memorial to a dynamic hundred years of south coast development.

The other memorials to the steamer trade are 20 identified wrecks. Among these are some important early sailing ships and early steamships. The earliest known sailing ship is the schooner *Rover* in Broulee Bay, where it was wrecked in 1842. The earliest steamship is the paddle steamer *Mimosa*, one of the founding purchases of the new Illawarra and South Coast Company in 1858, wrecked 5 years later north of Tathra. The first custom-made steam collier on the south coast, the *Lady Darling*, built in 1864, lies off Montague Island near Narooma where it hit a reef in 1880.

At Green Cape there are the remains of 2 ships built in the 1850s and wrecked in 1862 (*City of Sydney*) and 1886 (*Ly-ee-Moon*). Near the Imlay whaling boat station at Mowarry lies the hulk of the *Lanercost,* a collier barque wrecked in 1865, while in the late nineteenth century the *Kameruka* and the *Monaro* sank off Moruya. The colliers, *Lanercost* and *Lady Darling,* were wrecked while merely passing along the south coast, but ships like the *Mimosa* and *Kameruka* are intimately connected with the developmental phase of the region and the *Rover* is redolent of the heroic period of early settlement (Figure 25).

Gold and silver

Gold deposits are found in a wide variety of mountains and alluvial valleys from the Tomaga River south of Batemans Bay right down to the high ridge separating the Bega and Towamba river valleys inland from Eden. From 1852, when the Rev WB Clarke first recorded alluvial gold near Eden, right up to the present day, prospecting and mining of all sorts have gone on somewhere along the south coast region. Since most gold areas have been explored and exploited intermittently over a long timespan, the clearest way to present the mining history of the area (and to clarify its heritage impact) is to work down the coast from north to south (figures 26, 27).

Mogo Creek, a tributary of the Tomaga River, had alluvial gold and some 2 dozen areas were being energetically sluiced in 1857–58. This continued off and on, the township of Mogo grew up as a direct result and in 1871 between 40 and 50 men were working the gravels of the creek bed and bank. Shaft mining followed, to find the reef, and by 1892 crushing equipment had been installed. Mines also opened along the same reef to the south at Bimbimbi, where there was a battery by 1902. All the Mogo and Bimbimbi mines seem to have closed by 1913.

The Moruya River and its upper reaches known as the Deua River produced a certain amount of gold and silver. In 1856 gold was found at Wamban Creek, but the principal mines were close to Moruya on Dwyers Creek. Here, south of the township, a stamp battery had been set up by 1859, and the complex ores containing gold, silver and arsenic began to be exploited in the 1860s. The ores were being shipped to London for processing in the mid-1860s but in the 1870s the new owner, Francis Guy of Batemans

Bay, sent ore instead to Wallaroo in South Australia. Guy and his family continued to operate the mines until 1914: by 1890 he had installed a 10-head battery on the south bank of Dwyers Creek, had constructed a long weir on top of the natural rock bar in the creek and had made a new road better fitted for wheeled vehicles. In 1923 the mines were reopened by the Moruya Gold and Arsenic Syndicate, primarily to obtain arsenic: a chemical laboratory was constructed but the venture did not prosper and most of the site was bulldozed.

Some 8 kilometres to the south, the Bergalia reefs were attacked in 1865 but the company collapsed before 1870.

A much more determined effort was made at Nerrigundah, near the Tuross River and due west of Bodalla. Gold had been found there early in the 1850s and by 1861, 200 to 300 miners (soon joined by many Chinese) were scattered along 20 kilometres of Gulf Creek, a tributary of the Tuross. The creek is still hard of access and in most of the mining area in the nineteenth century no bullock wagons could gain entry. Nonetheless the number of miners increased to around 400 and the township of Nerrigundah expanded. The goldfield had remarkable staying powers. A 10-head battery was erected in 1900, new shafts were sunk on Mount Utopia, 16 kilometres to the west, and ore was brought with great difficulty to the Tinpot battery at Nerrigundah. It is probably Mount Utopia which is shown with a horse-whim at its shaft in a photograph of 1900 (Gibbney 1980). Shaft mining was, however, failing to be economic and the new technology of dredging (introduced from New Zealand in 1899) was tried instead: a dredge was built at Nerrigundah itself, because there was no way that one could be transported from the coast, and it was probably used in 1902–03. Presumably the dredge remains, in whole or in part, on Gulf Creek or the Tuross River, just as 2 dredges remain in Araluen Creek on the tableland above, but no survey of Nerrigundah appears to be available. This bravura dredge-building on a precipitous creek was the last fling of the Nerrigundah miners and the town and district quietly faded away. The store in the town closed in 1977 and the only building left today is a sawmill.

Only 1.6 kilometres from the coast, 7 claims were staked just north of Wagonga Inlet in 1882 and quartz-mining was planned. By 1900 the site was quite active: a 10-head battery was crushing ore and 2 Huntington mills were in the process of erection by the McDonald Goldmining Company. The shaft mining seems to have faltered, however, and in 1902 Wagonga, like Nerrigundah, built its own dredge. The local blacksmith constructed the wooden dredge on the beach of Wagonga inlet and it presumably dredged the estuary of the Tuross River more hopefully than profitably.

In the steep hills above Tilba Tilba on the slopes of Mount Dromedary an auriferous reef was sought for many years. There was a small rush in 1860 and, although that did not succeed, the storekeepers at Wagonga, which supplied both Nerrigundah and Tilba Tilba, kept encouraging continued endeavour at both sites. The reef was finally located only about 500 metres below the summit of Mount Dromedary and, despite the appalling difficulties of access, mining continued into the 1920s. The battery for the Enterprise mine was operated by 2 large waterwheels on the mountainside (Photograph in *Taken at Tilba* 1983). The largest of the mines, run by the Mount Dromedary

Proprietary Gold Mining Company, was employing 50 men in 1899. Although these 50 men produced only 87 ounces of gold that year, all this greatly encouraged the growth of Tilba Tilba which simultaneously reaped the benefits of goldmining and of cooperative cheesemaking.

Just inland from Merimbula on the Black Range, the Wolumla goldfield opened in 1896. In 1897 the Mount Momsen Gold and Silver Mining Syndicate raised 429 ounces of gold and 1,586 ounces of silver. In 1897 the syndicate installed a Huntington mill on the main road, but some ore was sent to the Dapto smelter, because of its complexity. Despite its excellent beginnings, nothing more was heard of Mount Momsen until 1902 when a little gold and silver was obtained: it then operated from 1913 to 1920 under new management. In the meantime the Pacific mine had become very productive from 1903 to 1915, peaking in 1908 when 3,227 ounces of gold were sold. This major mine reopened, with small returns, off and on from 1922 to 1937 and prospecting continued until the headframe and timber lining were burnt in 1954. Also in the period 1911 to 1915 the New Venture Mine produced over 1,000 ounces of gold and 560 ounces of silver. But after the First World War the entire field failed to produce any dramatic success and it quietly petered out in the 1930s.

The creek where Clarke had observed traces of gold in 1852 is now known as Yowaka, just south of Pambula. Payable gold was not found there until 1889, but by 1890 there were several shafts, 111 applications for mineral leases, 3 stamp batteries and a properly constituted Pambula Gold Field. In the following year there were 7 batteries or Huntington mills, 350 miners and a new township of Yowaka. Eleven companies were floated with a capital of almost $1 million. The gold was exceptionally fine-grained, so an undesirable amount remained in the tailings: as a result the new technology of cyanide treatment was especially relevant on the Pambula goldfield and several of the companies invested in cyanide plant in 1895 and subsequent years. Even before cyanide was introduced, the Mount Gahan and the Pambula Gold Mining Companies extracted almost $40,000 of gold in 1892 and 2 other companies sent their ore to Germany or to Sydney for processing. The Mount Gahan and Hidden Treasure Companies produced at a similarly high level in 1893–1894, the Falkner mine in 1895 (the year in which the company went over to cyanide treatment). In 1898 the Falkner mine treated its earlier tailings with some mild success while gaining over $24,000 from new ore.

After the 1890s the Pambula field declined but only very slowly; Mount Gahan closed from 1897 until 1906, the Falkner mine was closed between 1900 and 1902; and when the Pambula Mines Company was wound up in 1902, its major mine, Black & Berrys, did not reopen. On the other hand, Diorite Mine at Yowaka, which had closed in the 1890s, reopened successfully in 1909 and, partly by re-treating slimes and battery sands, continued until 1915. The Brassknocker mine reopened from 1911 to 1916 and again in 1937 to 1939, again working old sand with cyanide and in the 1940s, 1950s and 1960s prospecting work in the Pambula-Yowaka area, particularly inland at Mount Darragh, went on intermittently. At least 30 mines were operated around Pambula and the goldfield, which is in an area vulnerable to timber-getting, is in need of recording.

Yet another attempt by prospectors to find payable gold was on Sugarloaf Mountain just north of Towamba River inland from Eden. The Prospectors Mine operated from 1927 to 1937 and was opened again in 1948–49.

Still further south, the Yambulla goldfield on a tributary of the Wallagaraugh River was worked from 1891, but its successful years were only from 1902 to 1912, when the most productive of the 4 mines, the Yambulla, closed and the machinery transferred to the Pambula field.

All these gold reefs in the far south, Pambula, Wolumla, Sugarloaf Mountain and Yambulla, suffered from the fineness of the gold and the complexity of the ores. The technological problems in maximising the returns were never adequately solved, but the pertinacity of successive miners is striking (Willis 1973).

Quarrying

On both the north and south banks of the Moruya River there are very substantial outcrops of granite. The Scottish captain of Moruya pilot station noted the quality of the granite and sent a sample to Sydney in 1865. Quarrying soon began on the south bank under Joseph Ziegler and 1868 John Young leased Ziegler's quarry to supply granite columns for the colonnades of the GPO in Sydney. Although the shifting bar across the exit of the Moruya River did not make for comfortable navigation, particularly for boats laden with granite blocks, the position of the quarry so close to a substantial river was exceedingly convenient. After the major Sydney contract had been met in the 1870s, the quarry on the south bank gradually declined.

Moruya granite revived dramatically with another important Sydney commission in 1924. Dorman Long acquired mining rights to the granite outcrop on crown land on the north side of the river to supply the stone for the pylons of Sydney Harbour Bridge and the firm commissioned 3 freighters from Newcastle for the express purpose of bringing the stone from Moruya to Sydney. The stone was dressed on the spot at Moruya, so that it could be transferred directly from the ships to the new pylons.

A wharf was constructed near the quarry and a new settlement, known as Granite Town, quickly grew up, with a cosmopolitan population of Italians, English, Australians and, especially, Scots. These Scots came from the granite city of Aberdeen and gave a special character to the township under their quarry-master John Gilmore. Dorman Long erected 72 wooden houses and laid out streets. By 1926 Granite Town had a Progress Association, and a weatherboard recreation hall on granite foundations was opened in the following year. JJC Bradfield, the engineer of the Harbour Bridge, declared in that year, 1927, that there was enough granite in Moruya 'for all the building likely to be done in Sydney for centuries', but when the pylons of the bridge were completed in 1932 the quarrymen were already leaving Moruya and Granite Town soon disappeared. Houses were moved elsewhere – one very good example is now in Hawdon Street, Moruya – and the site is now deserted, though clearly identifiable.

Only the overgrown quarry remains. But the colonnades of the post office in Martin Place and the pylons of the Harbour Bridge have ensured that the 2 phases of Moruya

stone-working have made an indelible mark on the heritage of New South Wales (Neilson 1988; Spearritt 1982).

Fishing

Ever since Aboriginal times, the south coast has been well known for the quality of its fishing grounds. Because of transport difficulties before refrigeration, this was not a commercial enterprise in European times. Canning was ultimately the answer: in the nineteenth century there were short-lived attempts at Pambula in 1838 and Eden in 1871 to preserve beef for a wider market (Farrer 1980), but fish-canning did not begin until the twentieth century. The tuna fleet operating from Narooma and Eden supplied the major cannery, established in 1937 on Wagonga Inlet, and since then tuna and abalone have become very important elements in the south coast economy.

The potential of Twofold Bay for seine-net fishing had been noted by George Bass in 1798: 'the beaches arc admirably adapted for Seine hawling' (Bass journal 1798–99). This potential was finally realised in 1936 when trawling by Danish seine-nets was introduced to Eden. Thereafter flathead were caught in quite good numbers and trucked in ice to Sydney or taken by boat to Melbourne (Amato 1990). The establishment of Eden Fishermen's Co-operative in 1945, one of the earliest cooperative ventures in the postwar reorganisation of New South Wales fishing, confirmed the position of Eden as the leading fishery in the south coast region.

The game fishing available has also been a major element in attracting seasonal tourism.

Timber getting

The very large forested areas between the valleys offer a major historical resource and the large- scale timber getting which feeds the existing Harris-Daishowa woodchip plant at Eden and which would feed a proposed new chipping mill was a powerful environmental issue in 1990. This is a new and very destructive attack on the south coast forests, but it has a long historic context. The dairying industry of the valleys was not achieved without massive clearing of natural woodland. The careful preservation of clumps of trees by TS Mort at Bodalla and the exotic landscaping of Robert Lucas Tooth moderated the effects of clearing but did nothing to reduce the changing of the environment.

Wood was also needed, of course, for building houses and farmsteads. Magnificent stands of turpentine were sacrificed to create Tathra wharf. A great deal of timber was used in the dozens of goldmines. But real commercial timber getting only got underway in the late nineteenth century when a regular contract to supply railway sleepers was obtained. Forest exploitation continued after wooden sleepers became anachronistic and the present controversial logging on an enormous scale is a result of a dramatic increase in pace within the technology of the timber industry worldwide.

Conclusion

The south coast is a long way away. Unlike the Murray region it did not develop a special relationship with Victoria and communications with Sydney were dependent first on sailing boats and then, after 1858, on the steamships plying the coast from their Illawarra base. As a result the area developed slowly as a pastoral area, but developed a very important whaling industry in locally owned boats operating from Twofold Bay. Whaling also involved the Aboriginal community as equal partners to an unusual degree: elsewhere the local Aboriginal people suffered the usual loss of lifeways through European settlement on the coast and valleys.

The transformation from beef cattle and sheep to dairy cattle changed the face of farming and farm buildings and 2 major paternalistic estates, Kameruka and Bodalla, also created a physical expression of Victorian ideologies of work and benevolent landlordism. In the twentieth century Bega Valley assumed a dominant position in the milk and cheese production of southern New South Wales and Canberra.

The forested hills which separate the fertile valleys are rich in minerals and there was a long succession of attempts to win primarily gold but also silver and for a short time arsenic, mainly from the mountain creeks and hillsides. This brought outside capital into the area and has left manifest physical scars and important equipment not yet systematically recorded.

The forests themselves were gradually culled to build houses, byres and wharves and more commercially to supply NSW railways with high quality sleepers, but the large-scale logging which is so controversial today is a recent development.

The waters around contain many important wrecks, significant evidence of coastal trade over 150 years. They also contained whales and when the industry closed in the 1920s, tuna became a major commercial source, leading to the establishment of the Narooma cannery in 1937 and further expansion. Abalone has become increasingly important and game-fishing attracts many tourists.
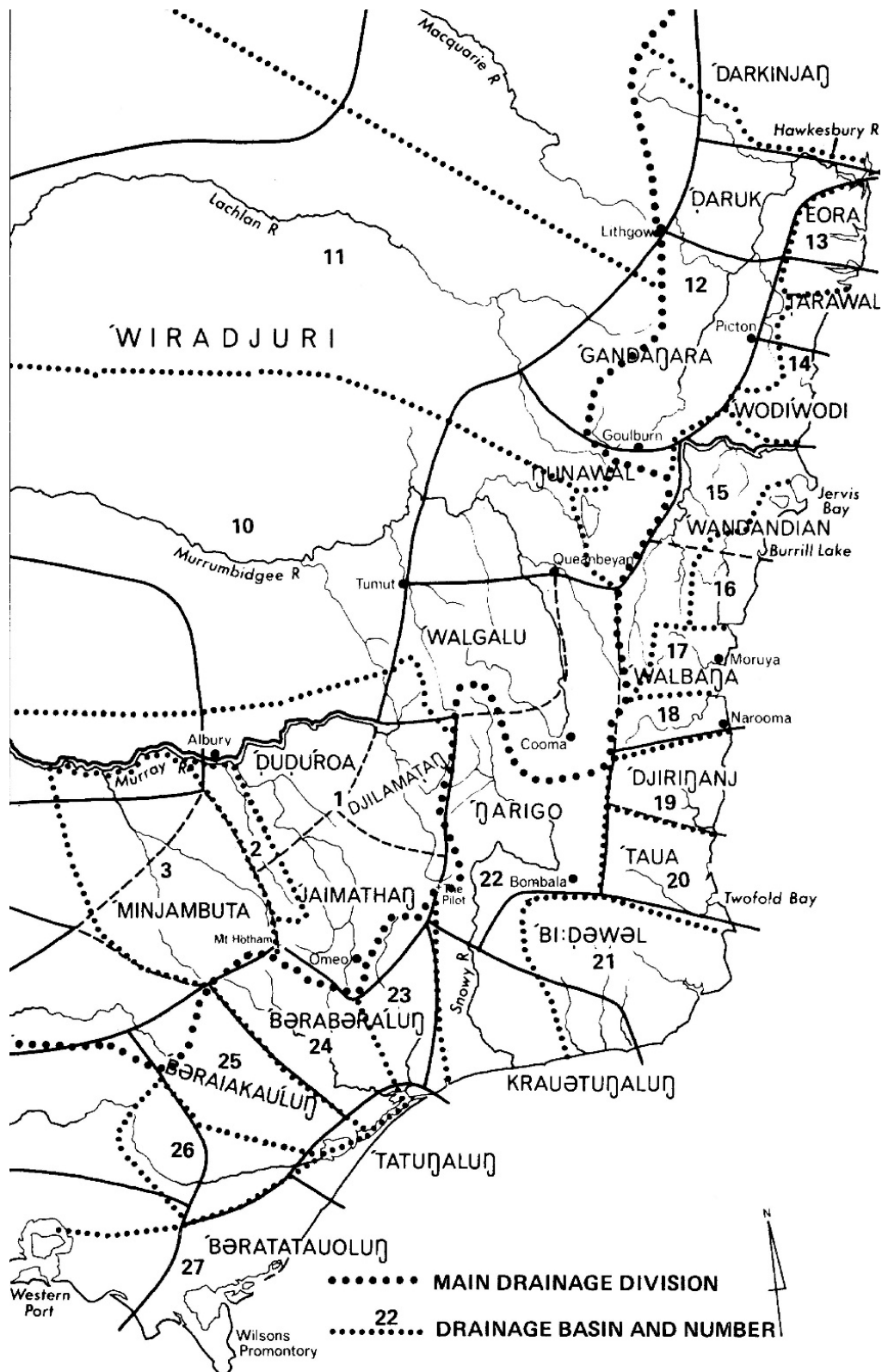
Figure 20   **Aboriginal groups in south-eastern Australia. Their territories shown in relation to the natural drainage basins. The basins of the south coast heritage region are the valleys of the Moruya (17), the Tuross (18), the Bega (19) and the Towamba (20). Source: JM Flood (1982) 'Katungal, Paiendra and Bemeringal' in S Bowdler, ed.** ***Coastal Archaeology in Eastern Australia,*** **Canberra, 1982, 30**
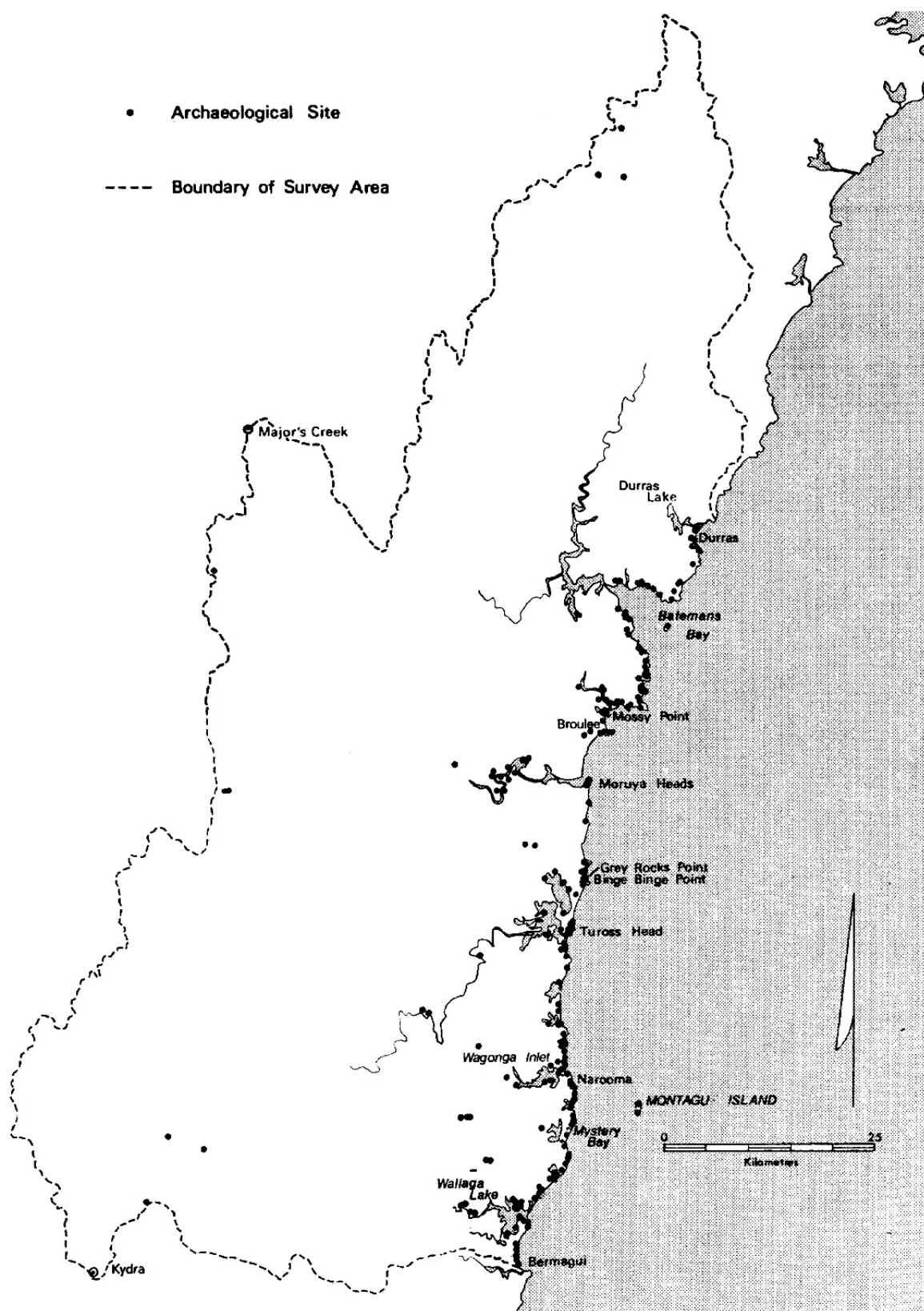
Figure 21   **Aboriginal archaeological sites on the south coast from Durras to Bermagui. Source: ME Sullivan (1916) 'Archaeological occupation site location on the south coast of New South Wales',** *Archaeology and Physical Anthropology in Oceania,* **11:57**
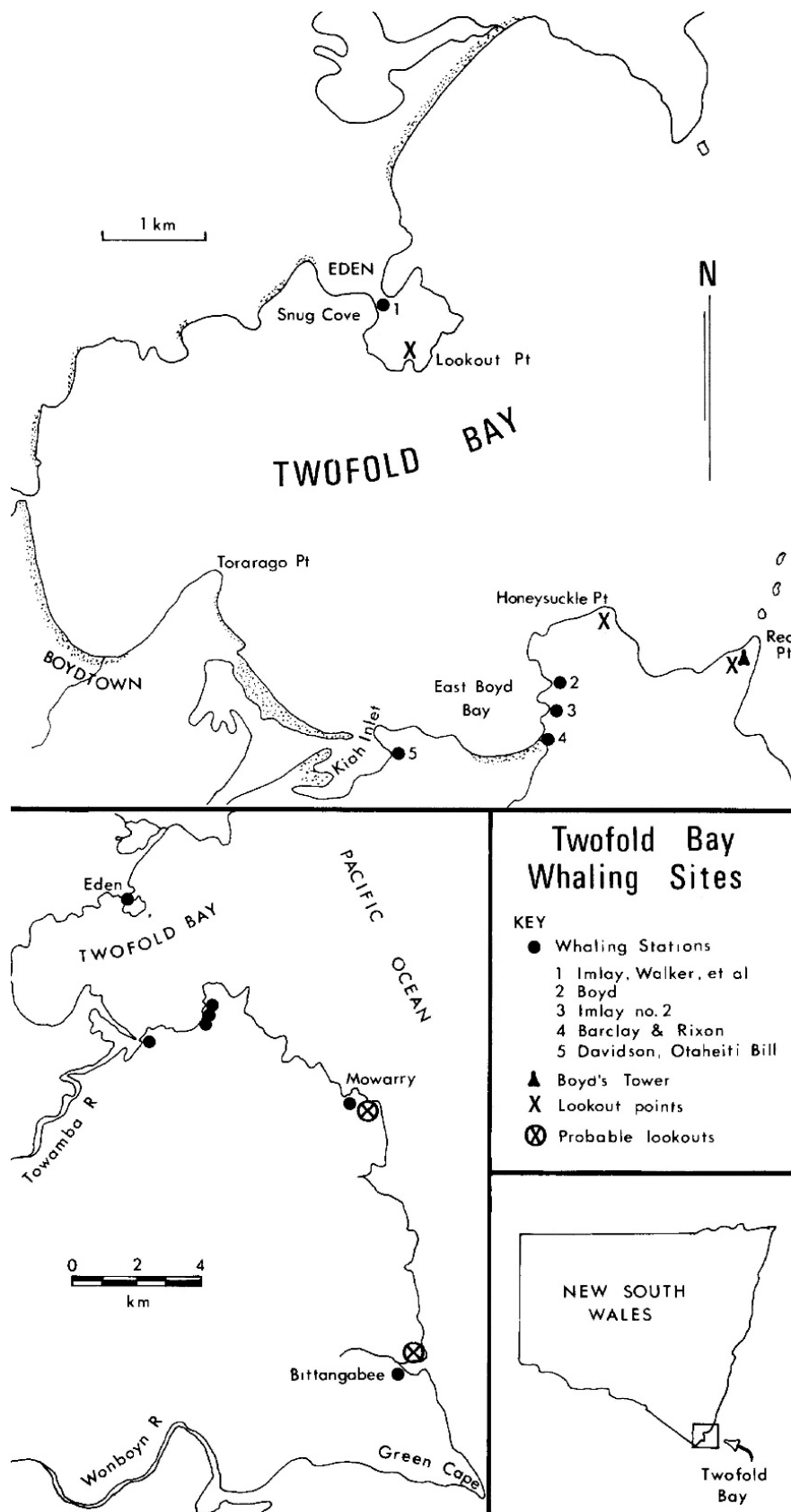
Figure 22 The location of whaling sites in the area of Twofold Bay. Source: Michael Pearson (1985–86) 'Shore-based whaling at Twofold Bay: one hundred years of enterprise', *Journal of the Royal Australian Historical Society*, 71:6
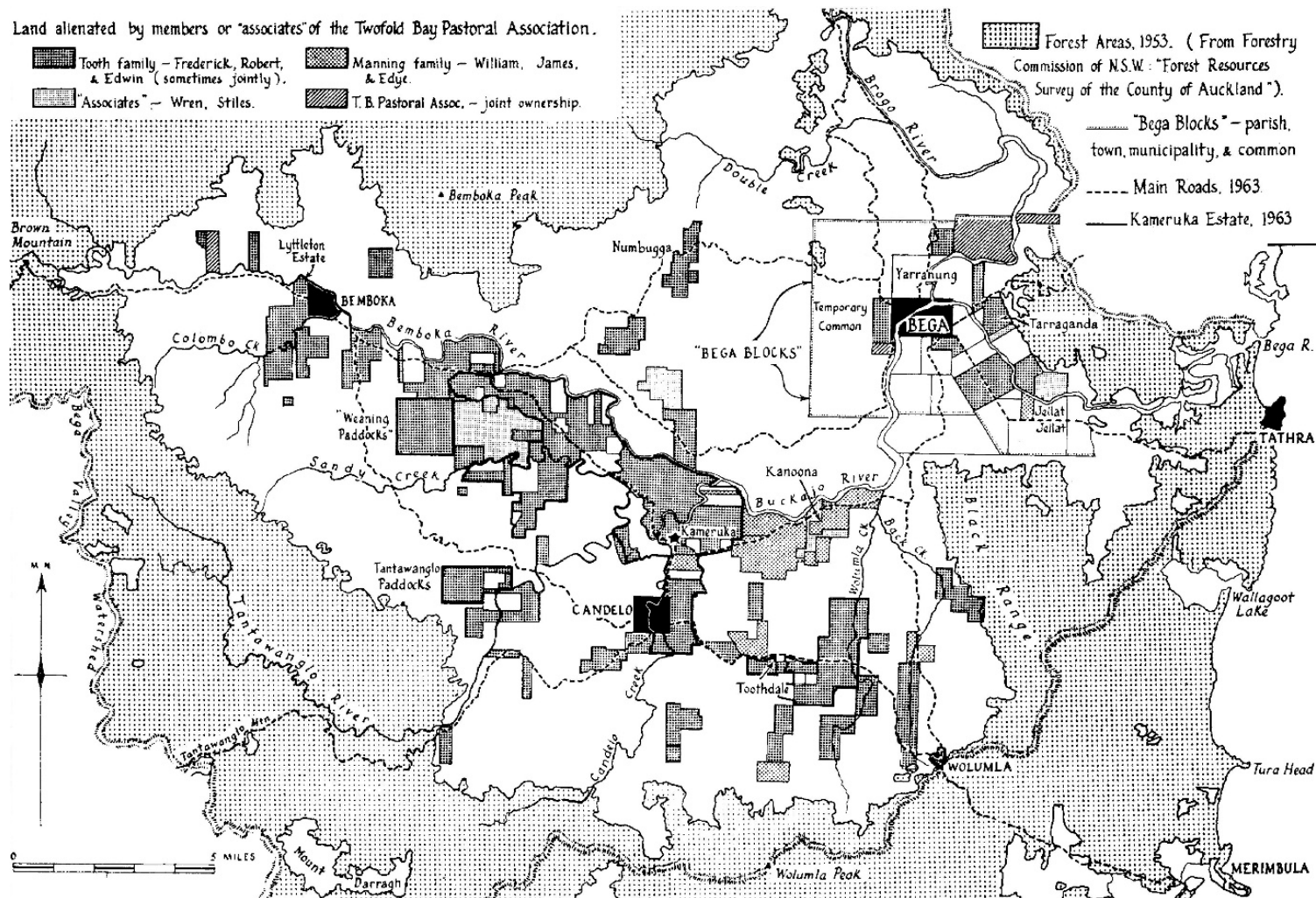
Figure 23 Bega Valley and the landholdings and sales of the members of the Twofold Bay Pastoral Association. Source: Bruce Ryan (1964) 'Kameruka estate, New South Wales, 1864–1964', *New Zealand Geographer,* 20:110
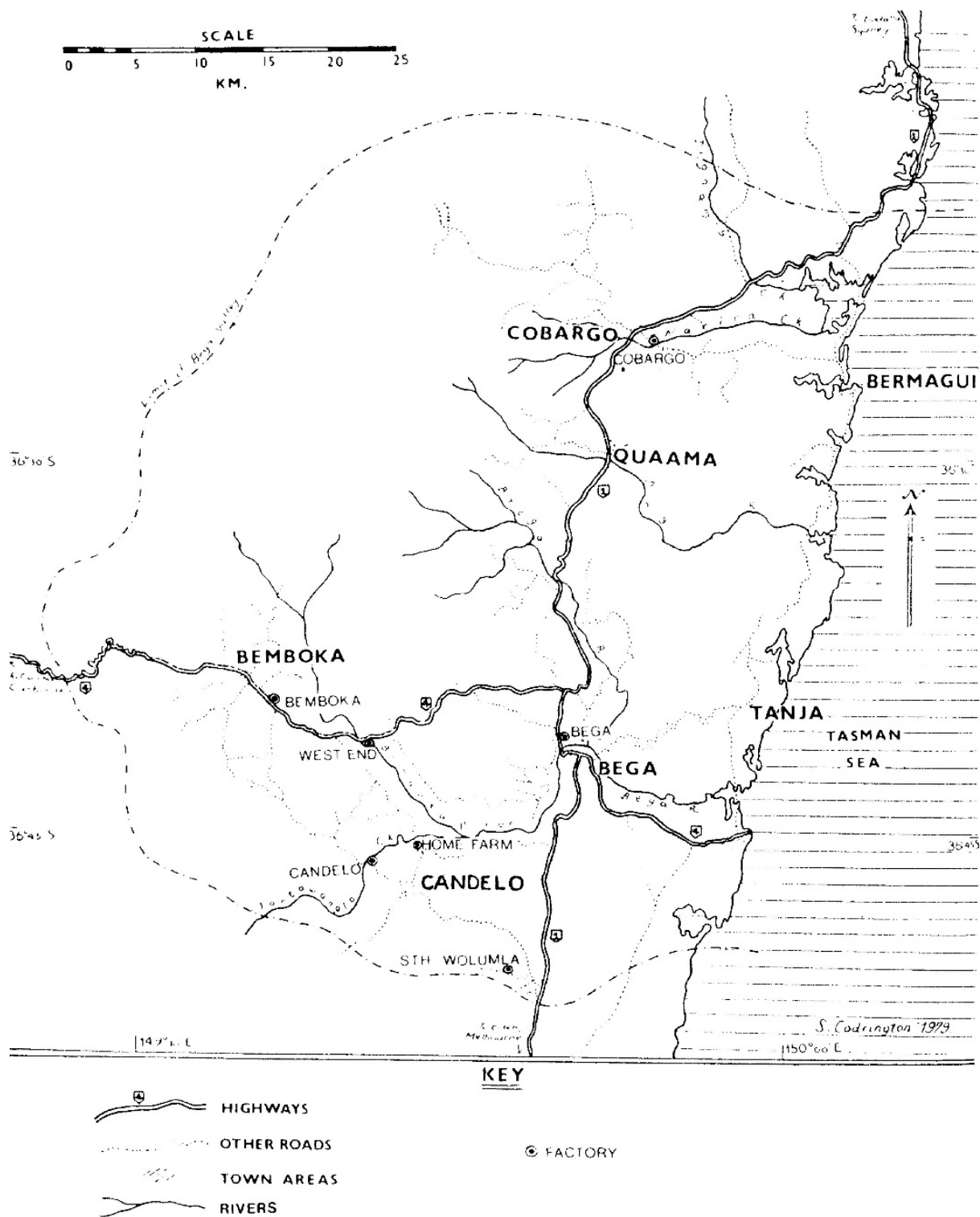
Figure 24 The location of butter factories in the Bega Valley in 1917. Source: SB
Codrington (1979) *Gold from gold: the history of dairying in the Bega Valley,*
North Ryde, 48
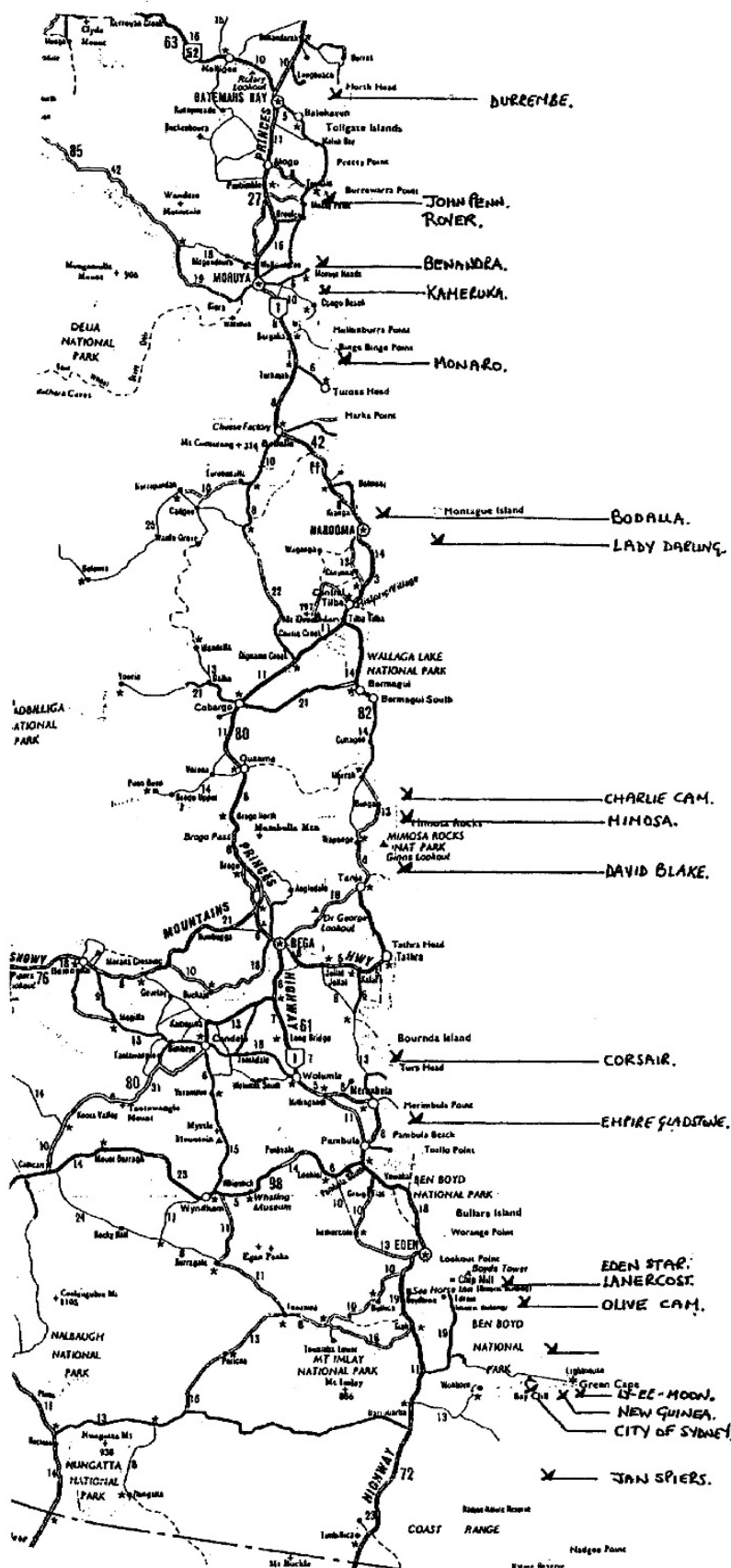
Figure 25   **Shipwrecks off the south coast region of NSW. Source: J Riley (1988)** *Known shipwreck sites in New South Wales,* **Sydney**
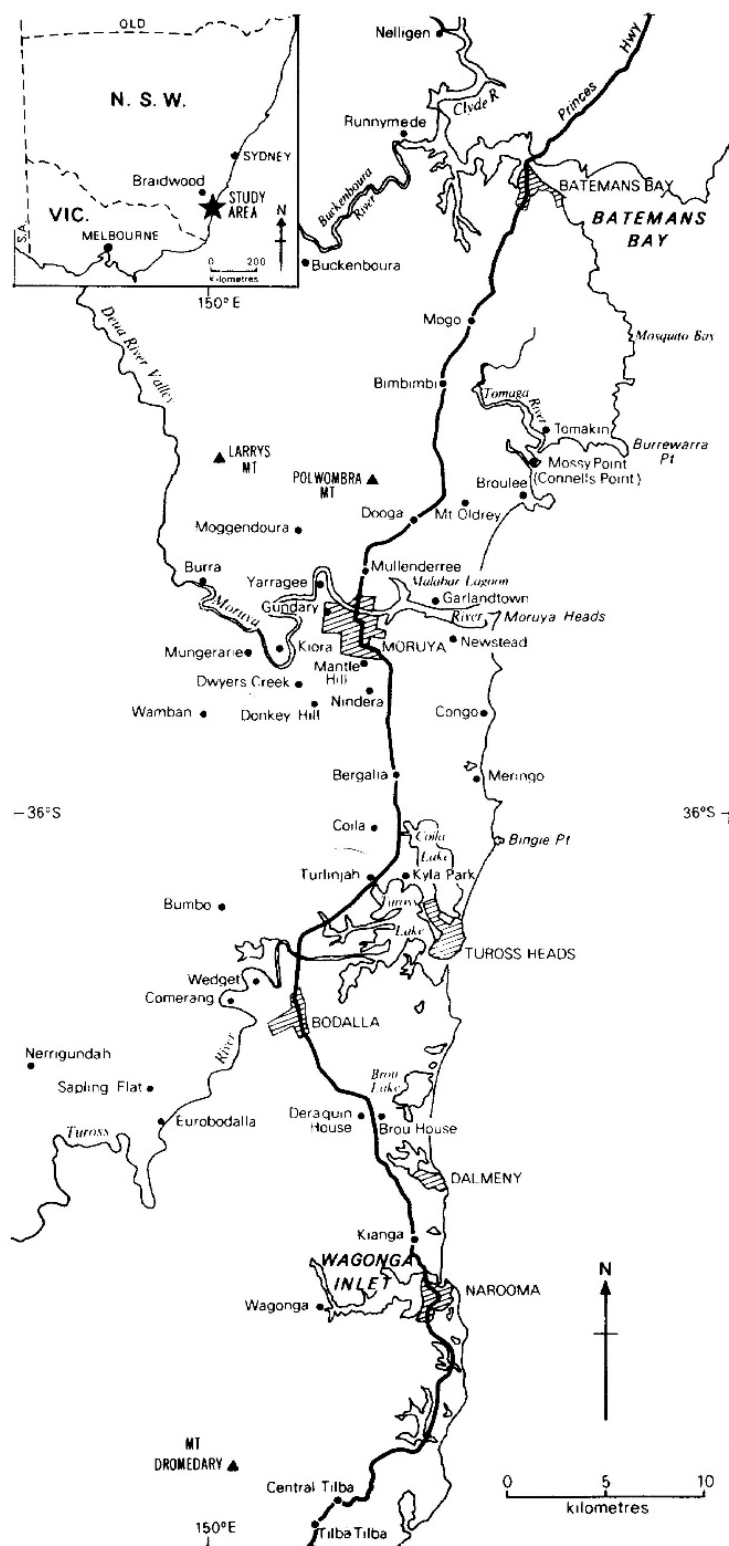
Figure 26 **Gold mining sites from Mogo to Mount Dromedary. The township names near the mines are underlined. Source of base map: HJ Gibbney (1980)** *Eurobadalla: history of the Moruya district***, Sydney**

**Figure 27   Mines on the Pambula, Sugarloaf Mountain, Wolumla and Yambulla goldfields.
Source: JL Willis (1973) *Mining history of the gold deposits of the far south
coast, Geol. Survey, Bull.,* 24:2**

15. Illawarra

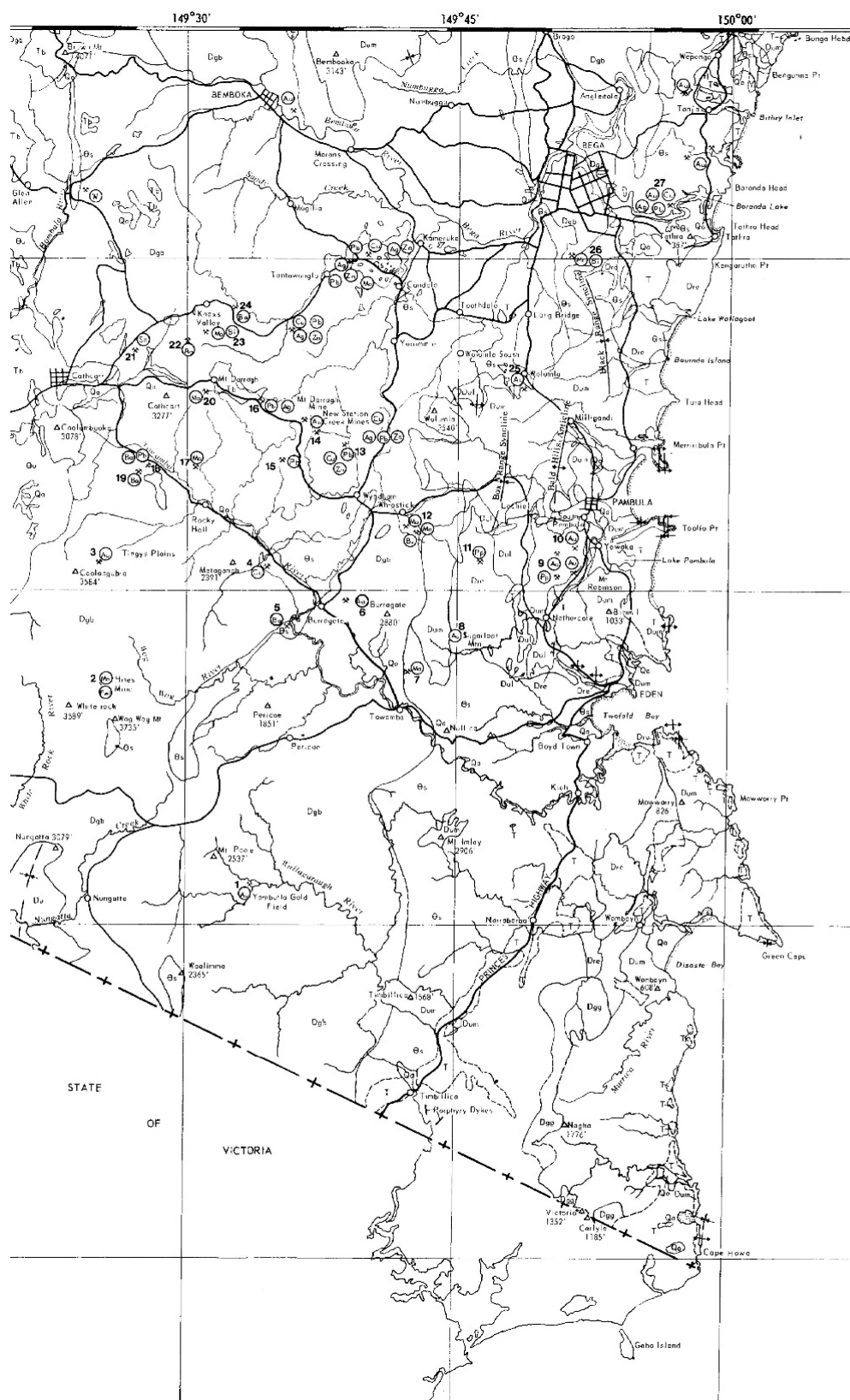This is a long, narrow coastal region bordered on the west by steep scarps with few crossings, as at Bulli, Macquarie Pass, Fitzroy Falls. The rugged sandstone plateau separated this from inland regions. It is connected to Sydney by railway from Nowra.

The coastal plain takes the form of valleys containing alluvium, and basalt in the Kiama area, separated by ridges, often of infertile sandstone.

The region falls into 4 districts: the industrialised and urbanised region between Thirroul and Kiama; the rolling valley and fertile latite hill country between Kiama and the Shoalhaven; the valley alluviums of the Shoalhaven and its delta; and the valleys and dissected sandstone plateaus south of the Shoalhaven.

Much of the district at settlement was in rainforest, as at Wollongong, the Jamberoo Valley and the Shoalhaven. Otherwise, except for valley wetlands, eucalypt forest prevailed, with bloodwood, spotted gum, blackbutt, grey box and stringybark prevalent. Much has been cleared for timber and grazing.

South of the urban area of Wollongong, dairying has been the chief rural industry. Resort and retirement development occurs widely.

The southern boundary of this region approximates to the 'limits of location' of 1829, the County of St Vincent. The 1830s definition of the Illawarra included the Shoalhaven River, and to include this an area south of the Shoalhaven has had to be incorporated

Local government areas

Kiama, Shellharbour, Shoalhaven, Wollongong

Map 21   **Local Government Areas and boundaries of the Illawarra historic region**

This region is a narrow strip of land separated from the tablelands by a steep scarp which offers access in only a few places, though a railway links Wollongong with Moss Vale for industrial purposes. It can be divided into distinct regions based on history and land use: the Greater Wollongong area in the north, dominated by its coalfield; the Kiama and Jamberoo Valley district; Kangaroo Valley; the Shoalhaven delta; and the largely undeveloped sandstone country south of Nowra but included in the City of Shoalhaven. Coal, dairying and resort development are the keys to this whole region.

Greater Wollongong

By a process of accretion, a number of separate port and mining settlements have grown into a single conurbation with a population of 211,000 in 1976. This settlement lies on a narrow coastal plain barred from the interior by a high escarpment which is crossed by 2 road passes (there was once a third, Rixon's Pass) and rail links to Sydney and the southern tablelands.

Historically, a further barrier has been the wide area of barren sandstone country which separates Greater Wollongong from Sydney. The topography of the coastal plain has influenced the form of the settlement: broad marshy valleys draining from the escarpment to the sea are unoccupied, or left to industry and playing fields, with houses occupying the intervening ridges. To the south, the plain widens around Lake Illawarra, giving room for recent residential expansion.

Settlement has proceeded in 3 phases, each leaving elements in the present cultural landscape. Rural occupation began about 1815, when graziers from the drought-stricken County of Cumberland found a way down to the pastures of the Illawarra. The first surveys were made in 1816, and by 1822 some 10,000 acres had been granted. In this early period, cattle and sheep were grazed on the extensive grasslands around Lake Illawarra, and Dapto and Shellharbour grew up as villages to serve this area. To the north, cedar cutters worked in the mixed eucalypt and rainforest land that occupied the narrow coastal plain and lower slopes of the escarpment. The useful softwood was shipped to Sydney, while rather less was taken by land to Parramatta. Cedar had nearly all gone from Illawarra by 1822, and the northern area was coming under cultivation on small farms. Most of the land by this time was held in large grants, and the farmers were tenants on clearing leases, given the use of the land for 7 years on the condition that they cleared it within that time. With cheap sea transport to Sydney, the farmers could produce wheat, maize, vegetables, eggs, poultry and dairy products for the profitable market there. There were 14,000 acres under cultivation in 1850, but rust had already appeared in the wheat – a prelude to the shift of this crop to the drier inland. Dairying replaced wheat, but urban growth has recently extinguished the last dairy farm.

Small villages grew up to serve the farmers at Fairy Meadow and Bellambi-by-the-Sea, but the main settlement was at Wollongong, the chief port, which was improved in 1844 by the excavation of a basin and building a breakwater, and again in the 1860s, while a lighthouse was built in 1868.

Wollongong was a late foundation because the Surveyor General believed at first that Kiama would become the chief town of this region – Kiama had much larger reserves of cedar. Since the earliest settlement a guard had been stationed at Wollongong boat harbour, but no land had been reserved for a town there. When therefore it was decided in the early 1830s to site a town at Wollongong, the best land available close to the harbour was privately owned. This land was surveyed with streets and allotments, and adjoining it a government town was laid out later. The private town was given a Market Street running from the harbour to the church site, and a market square, but this never developed as the main commercial area, which instead grew along Crown Street, the street most used by the settlers on the way to the wharf. The private town was retarded in its growth, becoming a good residential area in the mid- and late-nineteenth century.

Coal was found here in 1797, but the problem of shipping from a hostile coast delayed its exploitation. A mine was opened in 1849, on the breaking of the Australian Agricultural Company's monopoly, but this failed, and mining did not begin in earnest until the opening of the Osborne-Wallsend mine in 1857 under the stimulus of high prices occasioned by the gold rushes. Shipping was going over to steam, and secondary industry was developing in Sydney to further increase the demand for coal. By 1862 there were 4 mines, producing 42,000 tons per annum. Coal was shipped to Sydney from jetties placed on the northern sides of headlands for shelter from the prevailing southeasterlies, and the jetties were linked to mines high on the escarpment by tramways using inclined planes and gravity haulage on the steep sections. Mining villages grew up: to the south, where the mines were several miles from Wollongong harbour and Port Kembla jetty, the villages Balgownie, Mount Keira and Mount Kembla were located close to the mines. To the north where the plain narrows, they were located on the level land intermediate between mine and jetty. Some villages were company owned and contained uniform rows of weatherboard houses, while others grew up on private land, where miners built their own wooden, iron or hessian shacks. Nothing remains of the nineteenth-century private villages, but at Scarborough a company village is perfectly preserved, while there are elements too at Clifton, Balgownie and Mount Kembla. On the coastal plain was also located a number of coke oven plants, at Coalcliff, Clifton, Coledale, Scarborough, Bulli, Corrimal, Wollongong, Port Kembla and Unanderra, beginning at Wollongong in 1878, but the last of these old beehive ovens has now been demolished.

The 1860s were a period of depression in the coal industry, but the rapid growth of the economy brought increased demand in the 1870s and 1880s. In 1887 a railway linked the northern mines to Wollongong, and this line was linked through to Sydney in 1889. Freed from the costly and hazardous jetties (though some continued in use until the 1940s), coalmining expanded greatly, taking over most of Lithgow's trade in coal with Sydney. New mines and mining villages opened, for example Thirroul, Coledale, Clifton and Helensburgh, which is a government town but has some remaining company houses in the private town to the east. Coal continued as the major employer of labour into the 1920s and 1930s, the mining villages remaining separate settlements with Wollongong as the chief town.

The railway also brought tourism to the Illawarra. At first, tourists came to see the grand view from the top of Bulli Pass, the epitome of sublime scenery, and the elaborate hotel at Bulli was built to serve them rather than the local miners. Then, after 1900, as sea bathing replaced sightseeing, resorts grew up at Austinmer, Thirroul and Stanwell Park, though Thirroul was ruined as a recreational centre by railway development.

Wollongong's third phase of development has swamped the first 2 in a sea of postwar housing. Manufacturing industry came in as the result of harbour improvement. The Belmore Basin at Wollongong, despite improvements, was strongly criticised as inadequate in the 1880s and 1890s. One remedy was to develop Lake Illawarra as a harbour, and this led to the Mullet Creek development of a smelter for silver and gold ores in 1897, with the consequent stimulus to the growth of Dapto and Brownsville. But it is impossible to maintain an open entrance to the lake, and only the impressive foundations of the smelting works can still be seen. A permanent solution was found instead by building a breakwater to enclose Port Kembla which was completed in 1908, though even this harbour is unsatisfactory in north-easterly swells, and a new inner harbour was completed in the 1960s.

Port Kembla attracted the Electrolytic Refinery and Smelting Company dealing with Queensland and South Australian copper ores, using the excellent coking coal found on the Illawarra field. The First World War demonstrated Australia's undue reliance on Britain for fabricated copper, and the Metal Manufacturers plant was established in 1918 to make copper bar, sheet and tubes. This was soon followed by Australian Fertilisers in 1921, making superphosphate using imported phosphate rock. The present industrial complex of major works at Port Kembla was completed in 1928, with the arrival of Hoskins iron-smelting and steelworks, shifted from Lithgow because of the high cost of working there with diminishing reserves of iron ore and the costs of transporting products to Sydney. The railway to Marulan was built at this time to bring in limestone used in smelting iron, and the mining conglomerate Broken Hill Proprietary took over the works in 1935. Around these large firms has grown up a whole industrial complex. of smaller firms supplying the needs of the larger ones, from oxygen gas to refractory bricks and packaging.

The greatest industrial expansion followed in 1947, with Greater Wollongong's population rising from 66,092 in 1947, to 192,039 in 1971. The old mining villages have been added to and surrounded by new housing, and large new suburbs have appeared to the south, especially around Lake Illawarra where their poorly chosen sites would often produce a high incidence of infectious disease. New shopping centres have arisen to serve new areas at Fig Tree, Warrawong and Warilla, while a few of the older centres, such as Dapto and Fairy Meadow, have also expanded as commercial centres. The greatest impact, however, has been on central Wollongong, where a shopping and business centre erected in the boom years of the 1880s and 1890s, still largely intact in 1960, has been largely replaced by an almost complete set of new buildings.

Kiama and the Jamberoo Valley

ln 1797 George Bass sheltered in the lee of the Blowhole Headland, and the district was not then explored until Oxley and Meehan passed over it in 1819. They found a natural harbour, and a valley behind, stretching some 15 miles towards the sandstone Illawarra Scarp and the Barren Ground, the valley lush with rainforest on its latite slopes and marshy floor of the Minnamurra Swamps. This was a valuable source of cedar, but it was cut out mostly by 1825, being close to Sydney, and settlement was already taking place using large grants and clearing leases, for this was an extension of the small-farming area on the Wollongong plain to the north, The Jamberoo Valley was taken up in the 1820s, but the significant group of settlers, led by George Grey, did not arrive from County Fermanagh in Ireland until the 1840s, bringing with them a knowledge of dairy farming on basalt soils. By 1837 a plan for Kiama had been made, and the village of Jamberoo was for sale as a private village in 1841. It throve as the valley service centre, with churches built immediately, an inn, post office in 1852 and a school in 1858. Dairy products, notably butter, were shipped from Kiama, which had a post office in 1838, a courthouse in 1845, and Churches of England (1843) and of Rome (1858). In the 1850s there was a brewery.

As the Nine-Mile Brush was cut out, cedar getters moved south to Gerringong, a lesser natural harbour and farmers followed, finding there too the rich latite and alluvial soils. Clearing leases were again common: the lease would run for 7 years, during which time the lessee would clear the land and grow wheat, barley, potatoes and feed cows for milk, selling such timber as he could. At the end of 7 years the land was returned in a cleared state to the owner, who might use it, or more likely let it as a small farm tenancy, as more productive than extensive grazing. Gerringong was a late town, laid out in 1854; it had a poor harbour, but attracted stores, inns and churches, Anglican in 1856, preceded by Presbyterian and Wesleyan churches. Kiama itself was thriving and became a municipality in 1859.

With the widespread failure of wheat in the coastal districts in the 1860s this quickly became a specialist dairying district. Its skills in herd management and pasture improvement, and its closeness to Sydney so that butter was fresh on arrival, made it the supplier of premium grade butter in the Sydney market. Regular steam boats plied the trade, and the Robertson shipping basin was opened at Kiama in 1876. In the early 1880s Kiama created the new dairy technology, adopting the cream separator first imported by the Fresh Food and Ice company, and combining it with the steam power, large churn, and cooperation among farmers, which was to spread the dairying industry far and wide and, with refrigerated shipping, made butter an important export staple. The first cooperative factory site is marked by a monument at Kiama, but there were a great many factories in the district, most now only marked in a paddock by a concrete slab upon which the steam engine was mounted. With the coming of the central factory in the 1890s, buttermaking centralised at Jamberoo, on the Woodstock factory. The Omega factory building still stands on a headland south of Kiama: before the separator, it was intended as a condensed milk factory opened in 1880 and became a butter factory in 1886. Gerringong also benefited from the new, larger butter trade, grew and

became a municipality in 1871, while Jamberoo, with its new importance, became incorporated in 1890.

Broughton Vale came into existence to serve the new dairy industry, with a factory and incorporation. Joseph Weston, editor of the *Kiama Independent* and DL Dymock, were prime movers in this rural transformation of the district into a prosperous community of dairy farmers and cooperative factories. As farmers' sons began to seek new farms, and with all the local land taken up, there was a major exodus of people and cattle to the North Coast reaching a peak between 1890 and 1910. Little of the original brush remains, except in the Minnamurra Falls Reserve, and the Terragong Swamp has been entirely drained for pasture.

At Kiama, with better shipping facilities, the blue metal trade began in earnest in the 1880s, exploiting the Bombo latite. Large timber-loading staithes were built in Robertson Basin, and a street railway from the quarries, ultimately successful in 1913, carried the crushed stone to them. The building of railways ensured a large demand in the colony for blue metal, and 400 tons were shipped daily to Sydney. Quarrying began around the town, where the largest quarry has now been marred by bypass construction and a warehouse on its floor, and also at Bombo Point where methods of extraction and crushing are best seen. There was a jetty at Bombo, and a tent settlement for some quarrymen.

By way of stations at Unanderra, Dapto and Shellharbour, the railway reached Kiama in 1887, and was extended into the town in 1888. It at once competed with boats for butter, took a new fresh milk trade and also much of the blue metal. Kiama's port function declined. Tourism developed and new brick buildings sprang up, using bricks from Hurstville.

Kiama meanwhile boomed; an Oddfellows Hall of 1890 became a cinema in the 1920s. There were a Temperance Hall, and a School of Arts by 1900, and a Masonic Hall in 1909. The hospital, dating from 1887, was expanded in 1907. A gasworks was built in 1893 and a gasholder remains for preservation. Electricity arrived in 1925, a reticulated water supply in 1915, and an ambulance service in 1926. New Council chambers were built in 1933. Much of Kiama is twentieth century. Most blue metal quarries closed during the First World War, but Bombo quarry remained open until the 1950s. The staithes have been demolished.

Gerringong had a poor port, and saw no such development, though it had a dairy factory. Reached by rail in about 1890, it stagnated until some rejuvenation as a tourist resort post-1945. Meanwhile, the area has been absorbed into Sydney's milk-shed, and even the remaining factory, Waughhope at Jamberoo, makes no butter. Farms have been amalgamated and the population of rural areas has fallen, but liquid milk prices are high and there has been no concession to beef cattle. The Jamberoo Valley and surrounding areas are being bought up by city people, so that hobby farms and unsuitable recreational developments threaten an idyllic rural landscape, with its stone walls and exotic coral trees.

Kangaroo Valley

Aboriginal people have left behind relics such as sharpening grooves at Barrengarry and cave paintings, to mark the former presence of the Wodi-Wodi tribe which occupied the whole district from the Five Islands at Wollongong to the Shoalhaven. There are no stories of conflict and massacre in the literature on this district, but in Sydney it was said that many of the Aboriginal people at Botany were displaced people from the south coast. In Kangaroo Valley, the Aboriginal people survived at least in dwindling numbers until 1891, and in the 1880s the Protection Board had made reserves for them at Trimble Creek and near the township, but they disappear from the histories after that.

Kangaroo Valley was discovered in 1812 when Evans climbed Good Dog Mountain from the Nowra side and saw the river. Charles Throsby passed through the valley in 1818 in search of a route from the sea to the settled districts. It seems likely though that Richard Brooks had sent cattle into the valley in 1817, and certainly a grant was made to Brooks in 1820, and another to Cornelius O'Brien in 1823. These grants were around the site of the present village: others came down from Sutton Forest to occupy Broger's Creek in the western part of the valley. All these holdings were registered by Robert Hoddle in 1831 when he surveyed Kangaroo Valley. In the speculative times of the 1830s, more land was taken up for cattle stations, by Henry Osborne as an outstation of Marshall Mount near Dapto, by the notorious speculator AB Spark, and by L Duguid. The 1841 census however showed only 7 men there, 2 free and 5 convicts.

A more lasting phase began with the arrival of Charles McCaffrey, a dairy former, at Barrengarry in 1846, one of the Fermanagh men. He created a dairy and took butter to port by packhorse. This seed of future growth bore fruit with the breakup of the Osborne estate into small farms, and free selection: Kangaroo Valley was one of the few areas within the settled districts in which this brought an increase in settlement. Dairy farmers flooded in, and the population rose from 200 in 1861 to 1,400 in 1881. A bridge over the river was built in 1875, and butter went out via the Brogers Creek road or over Good Dog Mountain.

The dairy revolution started in Kiama brought the first butter factory in 1888, and by 1900 there were 5. The hand separator, which allowed farmers to take out cream to the central factory at Berry had closed all these by 1925.

At this peak of Valley population, facilities grew up. There was a school in 1871, a post office in 1870, a Horbury Hunt church in 1872 and a Catholic church in 1873. The Pioneer Hotel was built in 1875. A town was clearly needed, and the private town was sold in lots on the Osborne Estate in 1876. The grand Hampden suspension bridge was built in 1896 (Shoalhaven City Council 1991). There were many small service villages, at Barrengarry, Bundeena, Beaumont, Watamolla and Bugong gap, with at least a store, post office and chapel or church. These have now mostly vanished.

Farm amalgamation has reduced the population greatly, to less than 300; only 25 dairy farms remain of the hundreds there in 1900. Hobby farms and retirees are taking over the Valley. Most of those farmers who left went to the north coast.

The Shoalhaven

The shoal mouth of the river was noted by George Bass in 1797, and the area was explored inland by James Meehan in 1805. His reports of rainforest led to private cedar getting by 1812, but this was distant from Sydney, and permanent settlement was delayed as there was no overland route for traffic.

The story of settlement of the broad alluvial plains of the Shoalhaven delta and Broughton Creek begins with the Berry Estate. Alexander Berry and Edward Wollestonecraft arrived in Sydney from England with a large capital, on the basis of which they were granted 4,000 acres of land which they chose at the Shoalhaven. This was a grand colonial dream. Using convicts they cut cedar, grew maize, much of which went to feed pigs, tobacco and vines. They also ran cattle, which became the main enterprise when the cedar cut out. To improve navigation they bypassed the natural mouth of the river by cutting a canal at Crookhaven. By 1840 the estate, now in Berry's hands, had grown to 40,000 acres. At this time assigned convicts were withdrawn, and Berry, who wanted no tenants, ran the estate as a huge cattle station, with some timber getting on the side. The headquarters of the estate were at Coolangatta, on the northern head of the river mouth, where some buildings survive as a tourist centre: the main homestead burned down in 1946.

Small farmers first took hold on other, smaller estates on the south bank of the river, estates owned as Terara by de Mestre, Warragee by Graham, and Numba by the Berry Estate, though this was delayed in its development by the conservatism of the larger estates. Small farmers could also get land as selectors above the delta, and north of Berry, which was developed as a timber wharf by the estate, under the name of Broughton Creek.

The 1850s then saw a government town surveyed at Nowra (Shoalhaven Historical Society 1991). The main population of farmers lay about Terara and Numba, which flourished with stores, inns, banks and churches. The newspaper was published at Terara. In 1870 the most destructive of a series of floods on the Shoalhaven overran the delta towns, and encouraged a general shift to Nowra, on a flood-free site (Antill 1982). Numba and Terara survive virtually as ghost towns.

Alexander Berry's successor, David Berry, died in 1889, and John Hay, the new owner introduced changes which removed the stranglehold of the vast estate on development of the district. He was assisted by the arrival of the railway at Bomaderry in 1893. Much drainage of the saturated river flats was undertaken, and most of the 75,000 acres to which the estate had now grown was sold off to small farmers between 1889 and 1902. This was a vast accretion to the land open for dairying, and central factories were built at Nowra and Bomaderry in the 1890s. Meanwhile a new township was surveyed on a new location on the west side of Broughton Creek, which became Berry in 1890, and soon saw churches, post offices, banks and a large central butter factory in 1895. Bomaderry was also laid out by the estate, in 1891, and has become a manufacturing suburb of Nowra with a substantial Aboriginal population.

Nowra meanwhile since 1870 has been the chief town of the subregion. Laid out in 1852, it enjoyed little growth until the flood of 1870, since when it has had little competition as the dairy farms flourished around it on the alluvials. Steamships could go up to Berry and serve the farmers there, but most produce of the Shoalhaven was shipped from Nowra, maize, butter, pigs, potatoes, timber and cattle. Fishing has been an important enterprise. By 1881 the population was 886, by 1891 1,705. It became a municipality, though opposed by the Berrys, in the 1870s, and a new bridge was built in 1888 (and duplicated in the late twentieth century). In 1979 Nowra became the City of Shoalhaven, encompassing a large area north and south of the river.

South of the Shoalhaven

This area hardly belongs to the Illawarra proper and is included because the City of Shoalhaven includes it. Much is incised sandstone upland with poor timber resources, and most of this is included in the Morton National Park which continues the sterilisation from development ensured by its poor soils in the past. Development is closely confined to the coast and is mostly recent.

Ulladulla, however, provided the southernmost reserves of cedar, and provided a port site from very early, chiefly for Alexander Mackay's Croobyar estate, which occupied most of the useful land around the port. Tenants grew maize, potatoes, pigs and vegetables, to be followed by dairying, which became the local staple. A stone pier made a small but secure port in 1865. Another estate was subdivided in 1860 to the north and led to establishment of the town of Milton, which saw its chief but limited development in the 1870s and 1880s with some fine surviving buildings.

Jervis Bay provides excellent shelter for shipping and was much used in this way by ships sailing between Sydney and the south coast and Melbourne during storms in the nineteenth century. However, no major port developed there, despite hopes for Huskisson, laid out in the 1830s and provided with a 'wool road' to Braidwood which was never much used. There was some shipbuilding at Huskisson in the mid-nineteenth century, but most development is recent.

This coastal zone has in fact largely developed as a beach and fishing recreational area since the Second World War and almost universal car ownership. Culburra, Huskisson, St Georges basin, Sussex Inlet and Mollymook have developed as tourist centres in this period, varying chiefly in the class of accommodation they offer. Mollymook is a high-class development, Sussex Inlet has developed as a caravan park resort very largely, with some mainly fibro weekenders, though this has changed with a new canal development adding expensive houses. Professional fishing is largely confined to Ulladulla and its Italian population, but amateur fishing abounds on this stretch of resort coast.

Shipwrecks

On a coast with few harbours, shipwrecks were numerous. The artificial harbour at Wollongong could not serve the collieries to the north, and staithes were erected, as at Bulli, to ship coal. Insurance rates were high, and the railway to Sydney of great value in

reducing freight costs and hazards. The majority of shipwrecks lie around Wollongong, Jervis Bay and Wreck Bay, with a smaller number at Shellharbour.

Conclusion

The Illawarra region is dominated in the north by coal, and in the far south by barren sandstone uplands, but the common thread of the whole region is the dairying industry. Early agriculture was mixed, relying on wheat and maize and cattle grazing, but from the 1840s settlers made the Kiama district a specialist dairy district which innovated dramatically in the 1880s and made the whole region a specialist dairy area. At the same time, topographically the region has distinct subregions, separated by landforms and noted for some particular historical influence such as the Berry Estate or the mining of the Wollongong area. Its landscape retains the traces of many separate mining villages, each dependent on adit mine and jetty, now encompassed in a combination created by post-1945 industrial development. Intensely urban in the north, rural in the centre, and with resort and retirement villages in the south, the district is held together by topography and its dairying history.
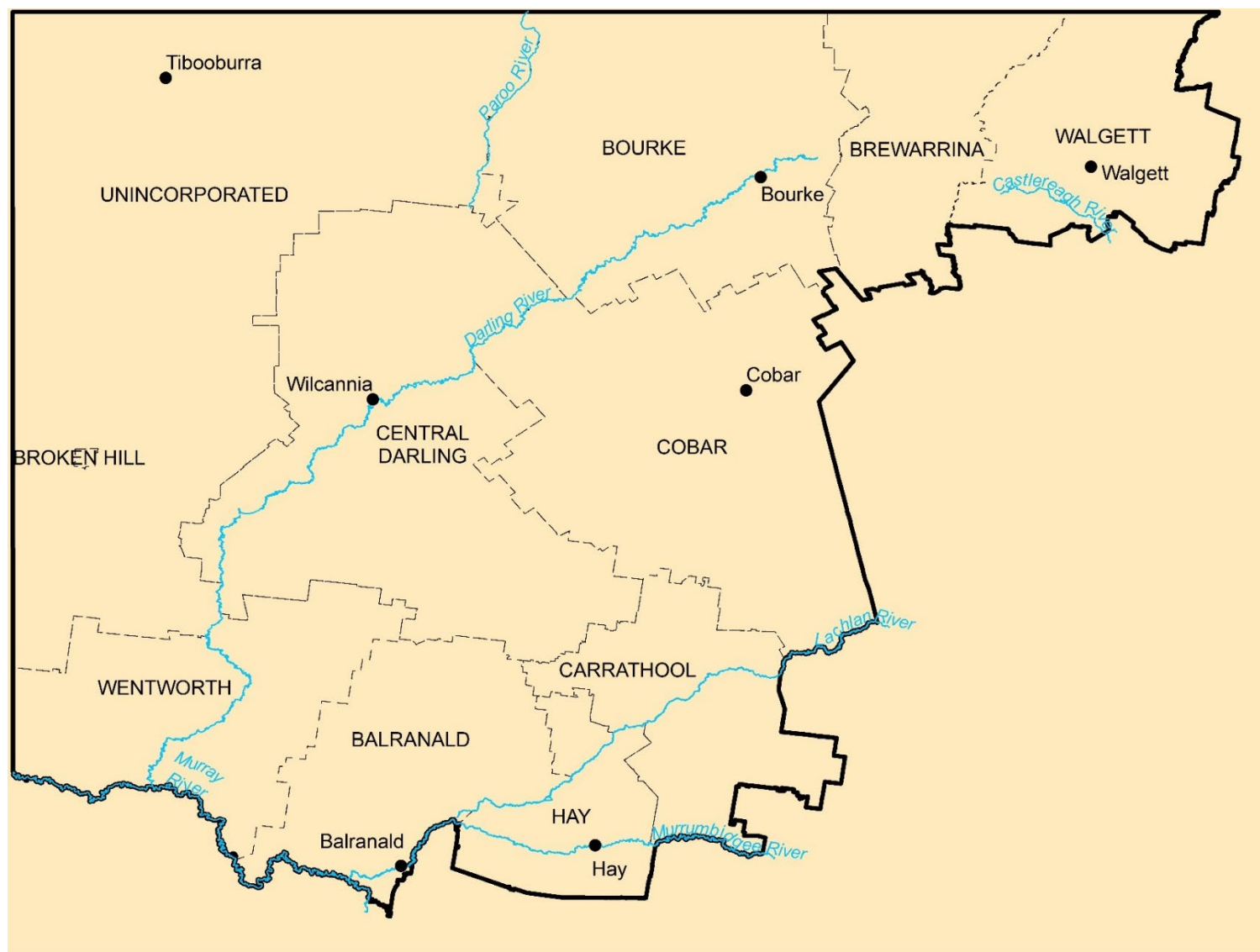
16. Western Plains

The region comprises an attenuated Western Division drained by the Darling River, with the lower Murray as its southern boundary. The whole area is semi-arid grazing country in a fragile state of unimproved and much-degraded vegetation.

Bordering the Darling and Paroo rivers and Cuttaburra Creek are black soil plains, with degraded Mitchell grass in the north and degraded saltbush in the south. The interfluve between the Darling and Murrumbidgee is covered with sandy colluvial soils carrying limited grazing, while the red-soil areas west of the Darling have saltbush and mulga grazing and artesian bore development. The whole is held in large grazing leases: it has long been government policy to reduce these to living area size.

West of the Darling solid geology penetrates the Pleistocene and Holocene alluvials and colluvials in the Barrier Ranges and Mount Browne which provided access to minerals, notably at Broken Hill, Milparinka and Tibooburra. In the far north-east, dunes intrude from the central desert region. There are many dry lakes, active and important for Aboriginal occupation 25,000 to 15,000 BP, and mallee vegetation occurs in the south-west. The Darling was navigable.

Local government areas

Balranald, Brewarrina, Broken Hill, Bourke, Carrathool, Central Darling, Cobar, Hay, Wentworth, Unincorporated, Walgett

Map 22   **Local government areas and boundaries of the Western Plains historic region**

Aboriginal people

In the huge area bisected by the Darling River, there were some 15 major groups of Aboriginal people (Figure 28). Those who had the river frontages of the Darling, Barwon, Warrego, Paroo, Lachlan and Murray had readier access to relatively secure food supplies than the people of the backblocks and the mallee.

Along both banks of the Lachlan, right through Carrathool and Hay shires to its junction with the Murrumbidgee, were the westernmost of the Wiradjuri, whose heartland lay further to the east, in the Murrumbidgee, Lachlan and Central Tableland heritage regions. Neighbours to the Wiradjuri in Balranald shire were the Jitajita.

Along the north bank of the Murray west to the Darling junction were the Kureinui and beyond the junction, around Lake Victoria and the Anabranch, were the Maraura, who hunted in the mallee of South Australia each winter. This area along the Murray encouraged the most consistently close settlement before Europeans arrived. The river banks hid many well-trodden pathways and bark canoes made the Murray a major Aboriginal thoroughfare. The fish, shellfish and tortoises in the river were supplemented by fruits, nuts, yams and edible grasses in the adjacent countryside.

To the north, the Darling offered similar, though less consistent, advantages. The large groupings known as the Barkindji were the dominant occupants of the lower Darling, which was known to them as the Barka: the Barkindji are literally the Darling folk. The southern boundary of the Barkindji was quite close to the Murray junction, where Wentworth now stands, and they controlled the northern part of the Great Anabranch. Their group lands extended upriver beyond Wilcannia and their good relations with the Parundji who straddled the Paroo in the north expanded the Barkindji area into Queensland.

On the middle Darling, south of the Warrego junction, the Naualko inhabited the west bank and upstream the Ngemba had the eastern frontages around Bourke and Brewarrina, the Baranbinja and the Ualarai the western.

All these people had ready access to the major river systems of the north, the Paroo and the Darling (including the Warrego, the Barwon and the Barwon tributaries). These people of the Darling used the river in the same way as the Murray Aboriginal people enjoyed that more dependable waterway. They too made bark canoes, unlike the Parundji who did not travel on the Paroo River at all. Since food was less easy to obtain in the Darling, the use of fishing aids is more impressive here than on the Murray. Although weirs were not unknown on the Murray, the stone dam just below the Warrego junction and the Brewarrina fish traps are justly famous examples of water management by the Aboriginal people of the Upper Darling. In 1848 the Commissioner of Crown Lands, WC Mayne, described the rock traps constructed by the Ngemba at Brewarrina (Figure 29):

> In a broad but shallow part of the head of the River where there are numerous rocks, the Aborigines have formed several enclosures or Pens, if I may use the word, into which the fish are carried, and there retained. To form these must have been a work of no trifling labour, and no slight degree of ingenuity and skill must have been exercised in their

> construction, as I was informed by men who had passed several years in the vicinity, that not even the heaviest floods displace the stones forming these enclosures.

> The Aborigines catch immense quantities of fish in these and are enabled also to destroy great numbers of fishing Birds of various kinds that are attracted to them by their prey thus imprisoned (Dargin 1976:52).

The remaining Aboriginal groups of the western plains had only occasional access to the rivers, usually in drought and excessive heat. On the east, between the Darling and the Lachlan were the Barindji and the Wongaibon. On west, in the comer country, the principal groups were the Wiljakali around Broken Hill, the Maliangapa on the seasonal lakes south of Tibooburra and right on the Queensland border the Karenggapa. Those groups nearest to the Darling might more regularly visit: the Wiljakali of Broken Hill joined the Barkindji on Menindee Lakes each year. But the far corner people looked out to the further west and north rather than south to the Murray-Darling (Hardy 1976).

In these arid lands, water management was quite effective: wells and tanks, sometimes several metres deep, conserved water and bark roofs inhibited evaporation. In the mallee of the west, the roots of trees acted as small water reservoirs which could be squeezed to supply a small but invaluable quantity of water fresher than any retained in the tanks.

It was the people of the mallee and the arid plains who survived European settlement longest. The Barindji, east of Menindee, still in the 1850s occupied scrubland with little European interference. The groups along the major rivers were already subject to much greater dislocation as the equipoise of their hunting, fishing and collecting was disrupted in the 1830s and 1840s. Although people like the Barkindji might fight back, their victories were short-lived. European settlers might abandon runs north of Menindee such as Tintinallogy or Weinteriga in the 1850s, the overlanders might avoid the route down the Darling in these years, but the intermission was brief.

The introduction of steam boats on the Murray and Darling after 1853 brought a decisive change for the riverine Aboriginal people. The first steam-boat voyage to the upper Darling was in 1859, when WR Randall reached Brewarrina. At Brewarrina the *Gemini* was stopped by the fish traps. The European reaction was ominous and characteristic:

> I believe [Randall's captain recorded in the *Gemini* log] that a passage may be very easily made through these rocks, so that steamers could ascend the rapids with the assistance of warps in seasons of moderate flood, when another 100 miles [160 km] would be open to navigation (Dargin 1976:54).

The fish traps were partly dismantled and paddle-steamers could occasionally go as far upstream as Walgett in the 1870s.

Already in the years before steam navigation, Aboriginal people on the Murray were working on stations and using their bark canoes to transfer bales of wool from the northern stations to the Victorian markets. But the steam boats accelerated the rate of change and brought it much further north. The Aboriginal people became timber cutters to feed the steamers' boilers; many became shearers and cattlemen on the stations

increasingly occupied in the 1860s and 1870s; Aboriginal women found employment as homestead domestic helpers and an increasing proportion bore children to settlers. The Ngemba were disrupted on the Darling and Barwon and the Parundji lost their Paroo frontages in the 1860s, a decade after the Barkindji. By 1871 on the Paroo stations:

> nearly all the work is done by blacks, who are transferred from one employer to another, sometimes at a very low figure indeed. They make splendid shepherds and their rations are not very expensive, as they consist of six or seven pounds of flour, two pounds of sugar, no tea, a fig of tobacco with a sheep to the tribe once a fortnight (*Town and Country Journal* 1871 cited in Jervis 1948:167).

Only in the arid area on both sides of the lower Darling did traditional life continue into the 1870s. But mobility was essential to life in the mallee and the sandhills and in times of drought the Aboriginal people, deprived of the full range of their traditional options, were obliged to come into stations or missions to avoid starvation. By the 1880s the process was complete.

> The people had no alternative but to graft European absurdities on to traditional camp life, for it could no longer be maintained in its pure form, and they were to some extent bewitched by the enchantment of the strange and the new. Thus it was partly for expediency, partly for novelty, that they made the adaptations which gave an appearance of squalor (Hardy 1976:140).

With the failure of most of the old paternalistic station owners during the depression of the 1890s, the Aboriginal position and population declined rapidly. Aboriginal reservations were created as displacement from the stations continued, under the Aborigines' Protection Act of 1909. The 275-hectare reservation at Pooncarie south of Menindee had the most permanent housing: the reserves in the corner country at Milparinka and Tibooburra or at White Cliffs north of Wilcannia had intermittent communities in tents. The influenza epidemic of 1919 devastated the remaining Aboriginal people. Some of the survivors were put on to a new reserve at Menindee in the 1930s and the last community of 70 Maliangapa living in the corner country in something like a traditional style was in 1936 trucked against its will to Brewarrina. In Bobbie Hardy's words, they had simply been 'squeezed out from the land which gave them continuity and contentment' (Hardy 1976:221).

Early European settlement

The 'seeming interminable flat' of the western plains, approached from South Australia by Sturt in 1829 and from the north-east by Mitchell in 1835, was gradually occupied by squatters in the 1840s. There were already wild cattle on the Darling in 1829, escapees from South Australian herds, and new stock were congregated also around the reasonably dependable waterways. The overlanders' route from the Namoi in the north down the Barwon and the Darling to the Murray in the 1840s created the need for small isolated supply towns at places where the rivers could be easily forded. The location of the Commissioner for Crown Lands first at Balranald in the late 1840s and then at Euston after 1853 both reflected and encouraged the growth of these 2 townships. The entire west Murray and lower Darling frontages had been divided into stations by the mid-1840s, with absentee owners like Thomas Darchy at Boyong or George Hobler at

Nap Nap and Paika or CW Wentworth at Tala (Figure 30). To the south at Boomiarcool, Edmund Morey had settled with his sheep and cattle in 1846 and built a wooden homestead and outbuildings.

On the upper Darling, in the Warrego country extending from Bourke far into Queensland, settlement came in the 1840s from the pastoral areas to the east and south-east, along the Bogan, Castlereagh, Namoi and Gwydir rivers (Figure 31). By 1850 the best grazing leases had been taken along the Barwon and the Mooni, by 1859 also on the east bank of the Warrego and right along the Culgoa, Birrie, Bokhara and Narran rivers up to and beyond the Queensland border. The backblocks between the Barwon and the Narran and much of the extensive arid area between the Culgoa and the Warrego had been taken up in the early 1860s during the general land boom (Figure 32).

Before 1860 cattle had been the most important element in the pastoral economy of the western plains close to the major rivers. Sheep were not unimportant, but they were consistently outnumbered and, since 6 sheep can graze on an area which will support only one steer, the hectarage devoted to sheep was quite small. In the Warrego district in 1859 where there were 39,000 cattle and 28,000 sheep, the sheep required only 12% of the area needed by the cattle.

The wool clip was not unimportant in the 1850s and the Aboriginal people plied a brisk trade in their canoes ferrying Darling wool across the Murray, but cattle reigned supreme until the steam boat came.

River boats

The first steam boats started to ply the Murray in 1853 and by 1859 their range was extended to the Darling. Although the Darling was never a dependable waterway, the impact of the river boat and the wool barge in the last third of the nineteenth century was very great. The 1870s were relatively wet and the Darling was unusually navigable, even beyond Brewarrina: in the floodwaters of 1879 the steamer *Brewarrina* even managed to get to Collarenebri, 80 kilometres upstream from Walgett (Ferry 1981), while another paddle steamer was said to have crossed from the Darling to the Paroo and thence to Queensland during a similar flood (Phillips 1972).

The river trade continued as the vital route for wool to Echuca (the Victorian railhead) or to Goolwa in South Australia, and declined only in the twentieth century. On the upper Darling, however, the purpose of the river traffic changed when the railway reached Bourke in 1885. This turned Bourke into the Echuca of the Darling, for, instead of steamers going all the way down to the Murray, a feeder service to Bourke developed instead. Thus, when the Davidson weir was built on the Darling in 1897 to improve Bourke's water supply, a lock (the only lock anywhere on the Darling complex) was also constructed to allow the wool barges to reach the railhead. In the twentieth century, however, the river trade declined in the upper Darling as in the lower and the last wool shipment along the river to Bourke railway station was delivered in 1931.

Most of the surviving steam boats are found in the Murray heritage region: the *Canberra*, *Etona*, *Pevensey*, *Adelaide* at Echuca, the *Gem* at Swan Hill, wool barges at Swan Hill, Moama and Echuca, the *Pyap* of 1898 plying a tourist trade from Swan Hill. Within the

western plains region the former barge *Wanera*, built in 1900 at Echuca and converted to a steamer in 1911, plies the Darling as a tourist vessel out of Mildura. The *Melbourne* also travels the Murray from its base at Mildura, where several other early barges and paddle-steamers have been restored. At Wentworth, on the Murray-Darling junction, the *Reliance* operates regularly.

Naturally there were numerous shipwrecks on these inland waters; some of the wrecks are of considerable interest. The burnt-out hulk of the 82-tonne wooden steamboat *Hero,* built at Echuca in 1874 and used as a Boundary Bend (Vic) timber mill until it was burnt in 1959, is easily visible a few kilometres west of the Murray-Murrumbidgee junction (Phillips 1972).

At Wentworth the hull of the *Rodney* in the Darling is an unexpected aspect of the shearers' strike of 1894. The *Rodney* was used to transport strike-breaking shearers to Moorara station and in exasperation the Wentworth strikers burned the steamship. Although the *Rodney*'s boiler and machinery were salvaged in 1895, the hull remains and is visible when the Darling is low (Tulloch 1959; 1965). The remains of the *Rodney* encapsulate much of the regional history: pastoralism, the river trade, the water-frontage stations, the tensions with the shearers' union, the uncertainties of the Darling flow.

Trade along the Barwon between Brewarrina and Walgett is also commemorated in the wreck of the *Wandering Jew*. This 66-tonne paddle-steamer was built in 1866 at Echuca. It plied the Murray-Darling for over half a century and latterly was the last paddle-steamer on the Barwon. ln 1912 it went into retirement at Brewarrina, where it burnt to the waterline in 1916. Like the *Rodney*, the *Wandering Jew* is highly visible (just above Brewarrina weir) when the river is low (Ferry 1981). It is a potent symbol of the breaching of the Aboriginal fish traps.

Although the large majority of the river boats was built in Victoria, particularly at Echuca, or in South Australia, at Goolwa, there was a small industry in the building of wooden steam boats at Wentworth: the *Warrego* (1865), the *Emu* (1867) and the *Mystery* (1884) were all constructed there (Tulloch 1959). A limited amount of shipbuilding was also undertaken at Wilcannia, where the 1.3-tonne *Mary Ann* was launched in 1886 (Phillips 1972).

River towns

As a result first of overlanding cattle and then of servicing the steam-boat trade of the later colonial period, towns grew up along the Barwon, the Darling and the Murrumbidgee. Almost all of these townships were laid out and officially organised in the 1850s and 1860s. Balranald, Hay and Maude on the Murrumbidgee were gazetted in 1851, 1859 and 1861 respectively. On the lower Darling Wentworth was created in 1859 and Menindee in 1863. On the central Darling Wilcannia received town status in 1866 and on the upper part of the Darling and Barwon, Walgett, Bourke, Brewarrina and Collarenebri were all constituted between 1859 and 1867.

The 2 decades after 1850 therefore created all the river towns of importance. The beginnings were small: Balranald was described in 1853 as 'this obscure and miserable

township' (Feldtmann 1976:23). Even after the river trade developed the towns remained small: in 1874 Wilcannia was 'anything but prepossessing in appearance; the buildings on the whole being of a very poor description, principally small weatherboard places' (*Town and Country Journal* cited in Jervis 1948:163).

The better-known buildings of these towns that date from the 1880s are the gaol, police station, courthouse, Athenaeum, hospital and brewery at Wilcannia, the courthouse at Walgett, the banks in Bourke (the London Bank of 1881 and the CBC 1883 building demolished in 1959), the post office, courthouse and hospital at Hillston on the Lachlan. The development of Brewarrina had taken place a little earlier, with the Mechanics' Institute opening in 1873 and the gaol at Wentworth was built in 1879, but the 1880s was the main period for consolidation.

The wharf was a central feature of all these river towns and it is an emotive part of the surviving fabric of Balranald, Brewarrina, Euston, Maude, Wentworth and most of all Wilcannia. The whole design of Wilcannia, with its dozen public buildings all ranged along the Darling, and the great wharf in a central position beside the 1896 opening bridge, is a marvellous summation of a vanished way of life on the western rivers (Figure 33).

Away from the rivers: water and settlement

There are huge areas of the western plains which are far from the rivers. The regular supply of water for stock and graziers alike has always been a critical problem just as it caused concern to the original inhabitants. Even in the runs tolerably close to the tributary system of the Darling, options open to eastern farmers were closed: there are virtually no rock formations on the western plains so that dams and weirs are difficult to construct on the major rivers. Clay foundations are simply washed away in flood and the standard timber overshot dam of the colonial period was not employed because of the scarcity of suitable trees. In any case, when the Narran River was dammed around 1873, the river simply gouged out an alternative channel within a few years, bypassing the dammed section. As a result, artificial drainage channels were rare and were on the Lachlan, not the Darling.

The red-soil country which dominated the plains away from the major rivers was quickly compacted by grazing animals. This was seen as an advantage by the graziers of the far north in the Bokhara channel country near the Queensland border because the compacting facilitated runoff of rainwater into the channels: these graziers in the 1880s claimed that 30 years earlier it had taken twice as much rainfall to fill the channels. But the effect of compacting on feed growth on the red-soil plains was serious and the improved flow of the outback channels was still very wasteful of water. WE Abbott's acute analysis of the water problem, read to the Royal Society of New South Wales in 1884, called for far more excavated tanks no more than 10 kilometres apart. This cheap and effective palliative to water sheep was, of course, merely the European version of what the Aboriginal people had been doing for centuries (Abbott 1884, 1885).

Dams on the creeks were also increasingly effective both for watering stock and for industrial purposes. The need to scour the greasy wool clip to reduce weight was

generally recognised and woolscours, either on stations and operated by hand, as at Mount Wood near Tibooburra (Pearson 1984) or in commercial mechanised plants on the navigable rivers, as at Bourke, were common by the 1890s. The station scours, such as Yancannia's, installed in 1880, were characteristically associated with a small dam and a steam engine for heating the water and driving the pumps (Shaw 1987). The effect of all this on station layout is very well illustrated by the changes at Yancannia between 1867 and 1885 (Figure 34).

Some stations were fortunately sited for groundwater. This was particularly true of the arid region around Menindee Lakes. Kinchega station took advantage of the overflow lakes and flood channels of the black-soil flats not too far from the Darling. Kinchega's 400,000 hectares supported 143,000 sheep in the 1880s, and the great shearing shed from that period is a characteristic symbol of the heyday of pastoralism, as are the conversion of the Menindee Aboriginal people into shepherds, the regular teams taking the wool bales to the Darling and the wool barges, and all relying heavily on the husbanding of the water resources of the area. The conversion of this overflow water into a permanent catchment did not occur, however, until the Menindee Lakes storage scheme began in 1960, controlled from the first successful dam in the Darling through the lakes, back into the Darling and the Anabranch. The innovations of the late nineteenth century were the sinking of deep wells and the tapping of the still deeper artesian basin.

Wells were costly. The Public Works Department in the 1860s established a string of wells on the main stock route from the Darling to the Lachlan and gradually improved the watering facilities on the far-west overlanders' route. Wells were sunk in large numbers by graziers but salinity was a perpetual problem. In the 1880s 5 out of 6 private wells sunk on the western plains reached salt water at a depth of less than 30 metres. Abbott told of one sheep station on which 19 wells had been sunk: only one had produced fresh water (Abbott 1884,1885).

The change came with the exploitation of the Great Artesian Basin. Artesian water seems to have been tapped first on a sheep station back of Bourke: here on Kallara station, artesian water flowed in 1878, just before the scientific identification of the Basin. Kallara is on the southern edge of the Great Artesian Basin and a large area to the south of Bourke (including Cobar) has no access to the underground reservoir because of the depth of bedrock: the Murravian basin, however, extends from the Victorian coast as far north as Central Darling shire and provides bore water for the southern and western parts of the western plains. The Murravian water is, however, markedly more saline than the Great Artesian water, so it is used largely for watering stock in the west: along the Lachlan and Murrumbidgee, however, the Murravian water is much less saline and is used extensively for irrigation.

The bores transformed the settlement of the region. Capital investment in bores was considerable: the deepest in the region today is 1,200 metres and a number of the colonial bores exceeded 300 metres. Despite this expense and despite the high failure rate in the nineteenth century when over 80% of the bores sunk were dry, the new resource created confidence and expansion. Artificial channels were constructed to

carry bore water through the dry paddocks. The chairman of Goldsborough Mort in 1893 looked forward to 'unlimited supplies of water enormously increasing the carrying capabilities' of the plains and, despite the setbacks of the 1890s, by 1910 there were 364 artesian bores in New South Wales, extracting some 500 million litres every day from the underground catchment (White 1984).

The rate of flow from these earlier bores has declined and, although the number of bores continued to increase, the total amount of water flowing steadily contracted, in New South Wales by 35% between 1915 and 1958. It remains, however, a fundamental resource and in the north where the water is least saline it provides the reticulated domestic supply for towns such as Walgett and Lightning Ridge.

To the outback graziers and overlanders the bores were fundamental resources from the 1880s onwards. The government sank bores along the arid route from Bourke west to Wanaaring on the Paroo. A few years later, at the end of the 1880s, the largest grazier of all, Samuel McCaughey, had sunk 4 successful bores on Dunlop station, south-west of Bourke, and Mamba's 810,000 hectares north-west of Wilcannia received their first bore-water as early as 1882. West of the Paroo, the first private bores were sunk at Yancannia station in the 1890s, although, as with ordinary wells, there was quite a high failure rate with these drillings. *The Pastoral Review* recognised the importance of the innovation and by 1895 had a regular column entitled 'Boring Notes'. And the great mineral discoveries of the corner country, at Broken Hill, Milparinka and Tibooburra, were much assisted by artesian wells, built both by the government and by private enterprise (Shaw 1987).

Artesian water was not an unmixed blessing: it encouraged overstocking and just before the drought of the late 1890s, the western plains were carrying 15 million sheep. It also drained the capital of the graziers and, as rabbits assumed plague proportions, sandstorms accompanied the drought, tanks and channels were silted up and by 1902 the sheep numbers had declined to around 5 million.

The region was the subject of a royal commission into crown tenancies in 1900–01 and the Western Lands Act of 1901 resulted. With amendments passed in 1934 and 1949, this is the legislation which still governs the Western Division. The 1901 Act extended pastoral leases until 1943 but also withdrew land to provide for smaller properties. This was used to give land to soldier settlers after the First World War and again after the Second World War. The result of the complex shifts in land occupancy in the Western Division was the virtual end of the nineteenth-century pastoral leases and their replacement by over 6,600 perpetual leases (representing about 1,800 stations). Some 30,000,000 hectares out of a total of 32,500,000 hectares were held on perpetual leases in units varying from 4,000 to 40,000 hectares, carrying 3,000 to 10,000 sheep. This is in sharp contrast to the nineteenth-century runs, when 100,000 hectares was a common size, when the largest station, Momba, occupied 810,000 hectares and when Samuel McCaughey's interlocking holdings totalled 1,420,000 hectares, with a Darling River frontage of 450 kilometres (Condon 1976).

During the twentieth century, sheep have remained central to the plains. The droughts of 1901–02, 1911 to 1916 and 1935 to 1945 naturally enforced a contraction in sheep

numbers, but the numbers always rose again in wetter seasons, peaking at about 60% of the 1890 figure in 1910 and 1925. Action to combat soil erosion has been very slow indeed; the Erosion Commission originally operated only outside the Western Division in the mid-1930s but the creation of the Soil Conservation Service in 1938 saw the gradual introduction of better management advice.

Mining

There were spectacular deposits of gold, silver, copper and opal on the western plains. The towns far away from the major rivers – Tibooburra, Milparinka, White Cliffs, Lightning Ridge, Silverton and, of course, Broken Hill – owe their existence to mineral discoveries. Although the first discovery of gold in the Barrier Ranges was made in the 1860s the critical period of successful exploration for gold, silver, tin and lead was the 10 years following 1875.

The first significant find was silver at Thackaringa, 36 kilometres to the west of Broken Hill (Figure 35). The expense of transporting the ore overland to the Darling, and thence to Europe via the Murray for smelting was not sustained by the quality of the ore and in 1880 Thackaringa was overshadowed by the gold discoveries 250 kilometres to the north at Mount Poole and Mount Brown (Figure 36). The gold mining in these hills led to the establishment of the town of Milparinka, where the sandstone courthouse, police station and bank, still standing in the ghost town today, are all testimony to the importance of the town in the 1880s. By the 1950s only 3 houses and the pub were still occupied.

Tibooburra, only 50 kilometres away, by contrast, has survived and is growing slightly in the 1980s and 1990s because of tourism. Its origins were similar to Milparinka, to serve the needs of gold seekers in the 1880s. Unlike Milparinka, granite is available in local outcrops and the principal buildings make some use of this most permanent of building stones. Despite the lagoon at Milparinka (almost certainly Sturt's Depot Glen of 1844), despite the Chinese market gardens on the creek out of town, the site of Milparinka did not lie on the primary stock route and as gold dwindled it was entirely superseded as a local centre by Tibooburra.

Prospecting continued around the future Broken Hill. To the north, at Euriowie 'the rugged splendour of the gorge was mutilated for a small amount of tin' (Hardy 1976:151). In 1882 hopeful finds, primarily of silver ore, were made to the north-west at Umberumberka and at Silverton. Day Dream mine nearby opened in the same year and operated its own smelter in 1885–86: the chimneystack and the great hillside flue leading to it are among the scenic splendours of the district's industrial heritage. Both Umberumberka and Day Dream closed early in the 1890s (Figure 35).

Silverton was the main township of this preliminary phase. It was well sited, on a gently sloping rise above a creek, with many eucalypts. By September 1883 it had 250 inhabitants, by December 500, and by the close of 1884 over 1,700. The *Town and Country Journal* caustically described the population of Silverton of 1883: 'the scum of the country began to be attracted to the new and prosperous field like blowflies to a carcass' (*Town and Country Journal* cited in Kearns 1972:15). It is appropriate that the

Silverton gaol building of 1889 should be a principal feature of the township today and houses a valuable museum of mining relics. The relationship between Silverton and the Darling steam-boat trade is emphasised by the Wilcannia interests in Silverton. The Reschs' cordial factory and brewery in Wilcannia opened another Lion Brewery in Silverton in 1885, the lawyer Thomas Johnson, well-known later in Broken Hill, came to Silverton from Wilcannia; and the son of Charles Dickens opened a branch of his Wilcannia stock and station agency in Bourke Street, Silverton in 1884.

The river was a long way away: the railway within South Australia was extended to Cockburn on the New South Wales border in 1885. The New South Wales government declined to link Silverton to Cockburn, so the Silverton Tramway Company was formed in 1886 to build a railroad over the 50 kilometres to Cockburn. This successful enterprise had several effects: it oriented Silverton-Broken Hill firmly towards Adelaide and away from Sydney or Melbourne; it terminated the local coaching business; and it supplied the necessary bulk transport to make the dramatic development of Broken Hill easy.

The rise of Broken Hill from 1885 onwards effectively stultified the growth of Silverton. The population there declined from over 2,000 to 600 in 1900 and municipal status was removed in 1907. The future lay with Broken Hill.

The jagged outline of the Broken Hill rendered up the secret of its miraculous lode only slowly over the 2 years after Charles Rasp collected some sample ore in 1883. The syndicate of 7 became the nucleus of Broken Hill Proprietary Company Limited (BHP) in 1885: they discovered that the ores in their leases on Broken Hill were not only rich but also easy to smelt, so they first used the Day Dream smelter and then constructed their own Nevada furnaces in 1886. The Silverton Tramway was extended to the new mines in 1888, just as the silver boom hit the stock exchanges and the town and mines expanded at an extraordinary rate. By 1891 there were some 20,000 people in the town and it had become the third largest conurbation in the state (Figure 37). Broken Hill remained, however, much more a part of South Australia than of New South Wales, while Melbourne, as the financial centre of Australia, had more influence over the company shares and the investments than Sydney: it was in Melbourne that the majority of the newly rich directors chose to live. Philip Charley, at Belmore Park, North Richmond, New South Wales, was very much the exception.

The history of the silver, lead and zinc from Broken Hill and the prodigious expansion of BHP into iron-smelting at Newcastle and Port Kembla and the Zinc Corporation into Conzinc Riotinto, have given Broken Hill a unique place in Australian mining heritage. A series of new mines, the North and South in the 1920s in particular, contributed to the continuing well-being of the town. Like all mining centres, however, Broken Hill has been at the mercy of international prices. The number of men engaged in the mines peaked in 1907 at 8,800, a quarter of the town's total population and, although the population remained at around 27,000 in the 1920s and 1930s, rising to 30,000 in the 1960s, the percentage of people employed in the mines has steadily dropped until in 1987 it was only 8.5% (Solomon 1988).

The townscape of Broken Hill is an unusual palimpsest of history. Because of its isolation, it built up early, and retained, a comprehensive retail service and catered for its own transport needs very flexibly. The Technical College and the mining branch of the Museum of Applied Arts and Sciences reflected the engineering and mineral rationale for the entire community. But the city lacks outstanding cultural amenities, it has a signal lack of the grand houses of managers or directors and the building stock is more egalitarian than impressive. The heavy male hand of the Barrier Council is enshrined in the townscape: the uncertainties engendered by mining risks, miners' strikes and international pricing are implicit in the low-key self-image of Broken Hill.

Long before Broken Hill was a twinkle in Charles Rasp's eye, Cobar had been cutting a national figure as a copper producer. Due south of Bourke, in an area chronically short of water (for the artesian basin is inaccessible), Cobar succeeded despite transport and climatic difficulties. The first recognition of copper ore in 1870 was followed by mining in the next year: the ore was taken overland to the Darling wharf at Bourke and sent to be smelted at Port Adelaide. Two companies were created and merged as the Great Cobar Copper Mining Co in 1876. Smelting on the spot had already begun in order to reduce the problems of transporting untreated ore to Bourke or, after 1877, to the railhead at Orange. A whole series of experiments with blast furnaces was undertaken after 1885 and the slagheaps from the earlier reverberatory furnaces were progressively used as copper-producing flux. The railway reached Cobar in 1891 and thereafter the company used its own coal-burning refinery at Lithgow to complete processing of the copper regulus.

Although the Great Cobar plant at Cobar was dismantled in 1920, other companies had opened mines and some had remained independent of Great Cobar. The New Occidental, after 2 false starts, operated profitably between 1889 and the 1920s and again after 1936, as its impressive tailings testify. The Chesney mine, owned by the New Occidental Mining Co and the New Cobar Mine operated from the 1930s until 1948. This group of mines under the New Occidental umbrella closed in 1952 and a great deal of destruction to buildings and plant followed in the 1960s.

Copper mining is not entirely dead and the owner of the Elura Mine (now Endeavour Mine) assisted in the redevelopment of the Cobar Regional Museum in the administrative offices of the Great Cobar company. This museum not only preserves mining (and pastoral) relics but also interprets a remarkable modified environment. The museum, as Kylie Winkworth has commented, 'pays tribute to the persistence and tenacity that kept the town alive through heat and dust, drought, depression and mining disasters' (Winkworth 1988:7). It also draws attention to the satellite towns which grew up around the mines outside Cobar: these abandoned sites are of rich heritage potential, containing such evocative images as a garden of rocks 'laid out in the scrub with elaborate shapes marked out in stones and bricks on the red soil' (Winkworth 1988:6–7).

Finally there are the opal fields of the west. On Tarella station, north of Wilcannia, opal was found in the 1880s but disregarded until 1890. By the time of the rich strikes of 1893–94 the township of White Cliffs had been created. The population peaked in 1899 with 2,500 miners and over 1,000 others: this was greatly reduced in 1900 and a huge

exodus to Lightning Ridge occurred in 1907–08. By 1914 White Cliffs had contracted to about 30 inhabitants and now only 3 buildings survive from the 1890s, surrounded by very tangible traces of mining. Because unreasonably large areas were granted as individual mining concessions and because of the power of a single company, the Wilcannia Blocks Syndicate, there are some very large mullock heaps indeed at White Cliffs, particularly at the open cut which closed in 1898. As early shafts were abandoned, they were converted into underground facilities, so that, like Coober Pedy, White Cliffs by 1900 had an underground restaurant, an underground bakery and a number of underground dwellings, which are still in use as workshops and homes. The town above ground had grown when the silver mining ended on the nearby station of Nuntherungie and an entire hotel was re-erected at White Cliffs (cf. Rowe 1983).

The decline in the international opal market after 1898 created a decline in the population and facilities at White Cliffs and the Centennial Hall seating 600 people became sadly inappropriate. Lightning Ridge became the premier opal centre of the state from 1906 onwards. Here, near the Queensland border, north of Walgett, many of the White Cliffs miners settled: the problems of the relationship between the freelance miners and the syndicate with capital were largely resolved at Lightning Ridge, as they never had been at White Cliffs, and open-cut opal mining was stopped. Here on the black-soil plain, the opal layers outcrop on the side of slopes such as Bald Hill but can also be reached by shafts which cut across payable opal at 4 different levels, between 12 and 30 metres in general. A very similar opal field was found in 1926 at Grawin 50 kilometres to the south and Glengarry also opened profitably.

The famous opals with romantic names, Light of the World, Flame Queen, Pandora, which have come from Lightning Ridge, reflect an international business which is still important. Just as at Tullie, Cornthwaite Wollaston so interested European, American and Japanese buyers in White Cliffs opals almost a century ago, so the dealers of today command an exceedingly lucrative market for Lightning Ridge stones. Both these opal centres, the ghost town beyond Wilcannia and the success story beyond Walgett, have very substantial heritage value.

Conclusion

The western plains are a vast, largely arid area, tempered by the waters of the Darling, the Barwon, the Paroo, the Lachlan, the Murray and the Murrumbidgee, but primarily the Darling. Both Aboriginal and European settlement found the river frontage easy and convenient, but unlike the Europeans Aboriginal people had come to terms with the austerities of the backblocks and lived a culturally rich and economically viable life far from the major rivers. The disruption to traditional life by European pastoralists usurping the water frontage was followed by further European expansion only after the introduction of paddle-steamers and barges on the Murray-Darling made large-scale wool production attractive. The immensity of the sheep runs gave some security against localised problems and also gave some sort of alternative way of life to the Aboriginal people.

The depression and drought of the 1890s was followed by new legislative controls over the western area which led to substantial reductions in the size of runs, to new settlers (including returned soldiers) and to the final displacement of the Aboriginal people. The river towns, with their wool stores, wharves and facilities, had grown in the heyday of the steam boats but that had passed in the twentieth century and the railway system determined their continuing prosperity. New towns, most strikingly Broken Hill, the only city of the plain, appeared away from the river because of mineral discoveries: copper at Cobar in the 1860s, opals at White Cliffs and Lightning Ridge, silver, lead and zinc at Broken Hill in the last hundred years.
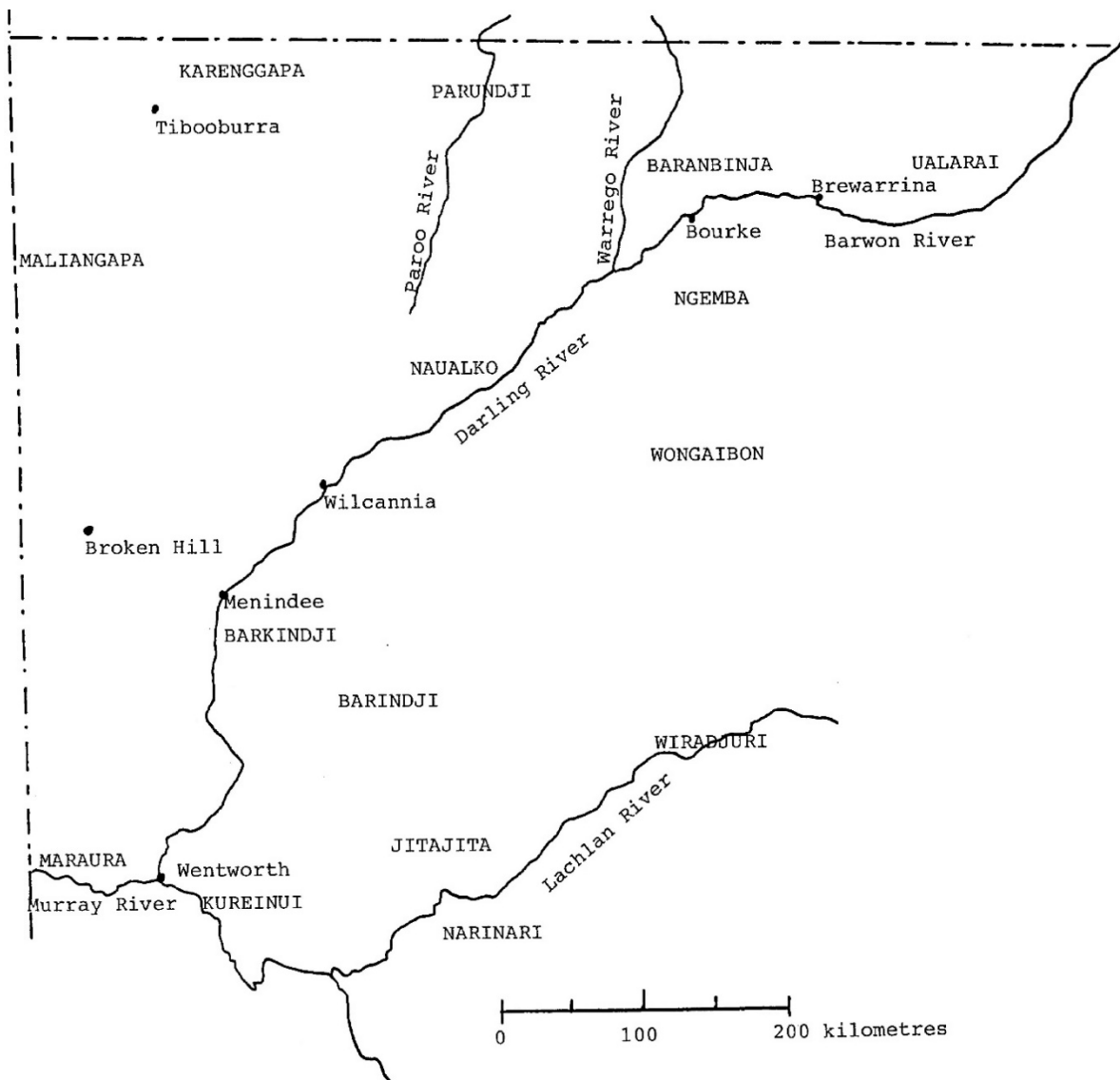

Figure 28 **Aboriginal people of the Western Plains. Aboriginal groups are named in block capitals. Compiler: R Ian Jack**

NGUNNHU OF THE NGEMBA

A — Position from which photograph p 41 taken.
B — Muar.
C — Kullur.
D — Dnerraginni.
E — Kirragurra.

PLAN OF THE FISHERIES
AT BREWARRINA

A.W. Mullen , Surveyor
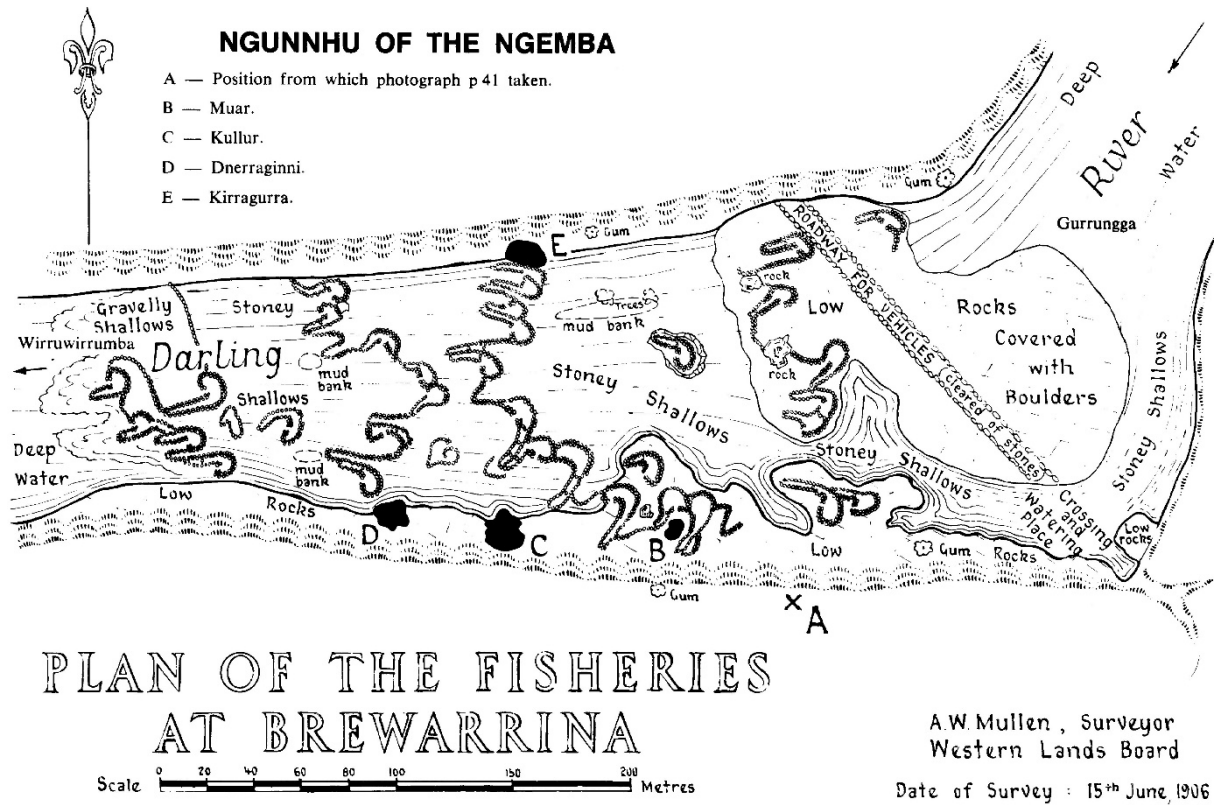Western Lands Board

Date of Survey : 15ᵗʰ June, 1906

Scale

Figure 29 The Aboriginal fisheries at Brewarrina as they were in 1906. Source: P Dargin (1976) *Aboriginal fisheries of the Darling-Barwon rivers*, Brewarrina, p 37
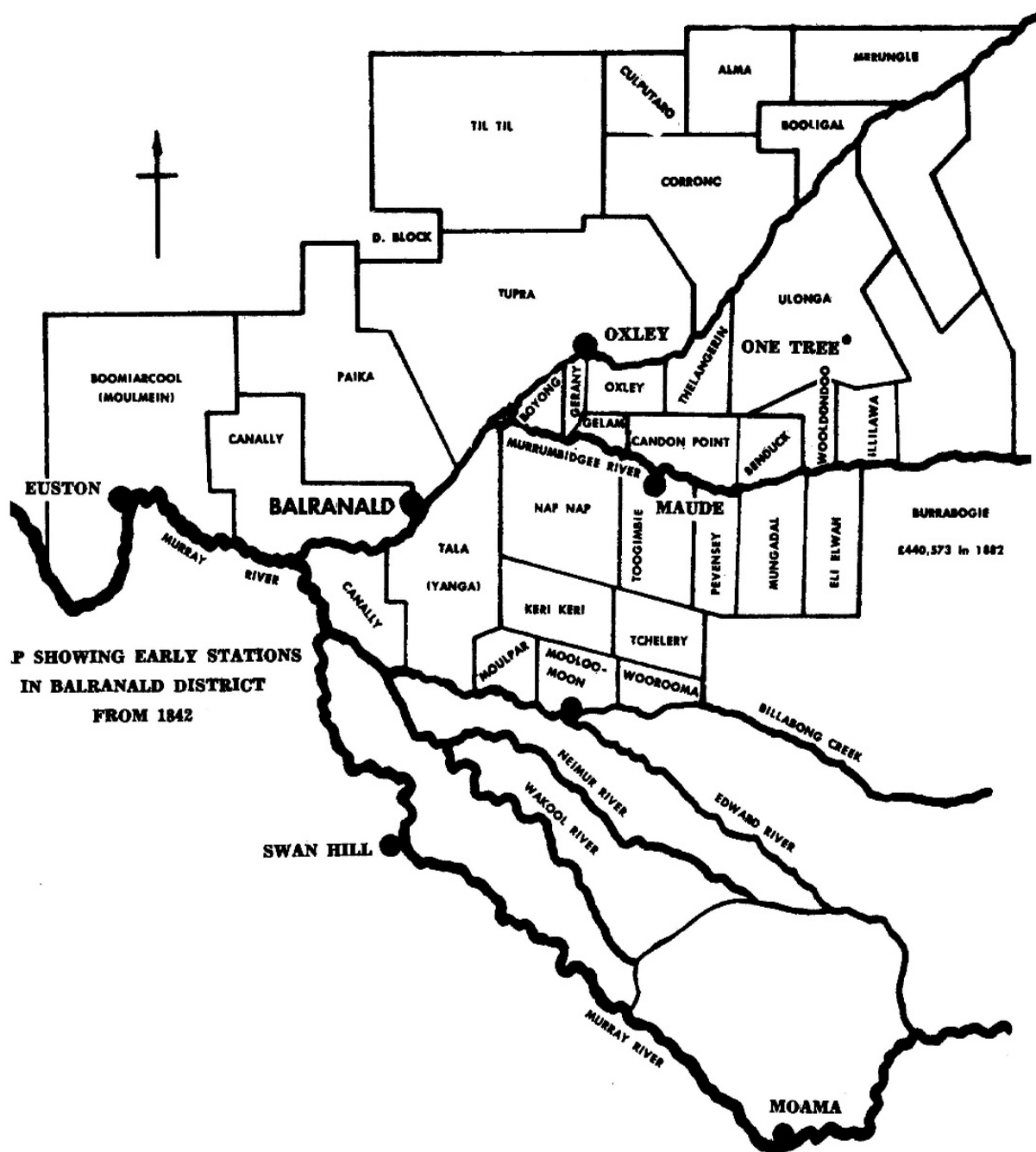
Figure 30 The stations in the Balranald area in the 1840s, showing both water frontages and backblocks. Source: A Feldmann (1976) *The Balranald story,* Balranald
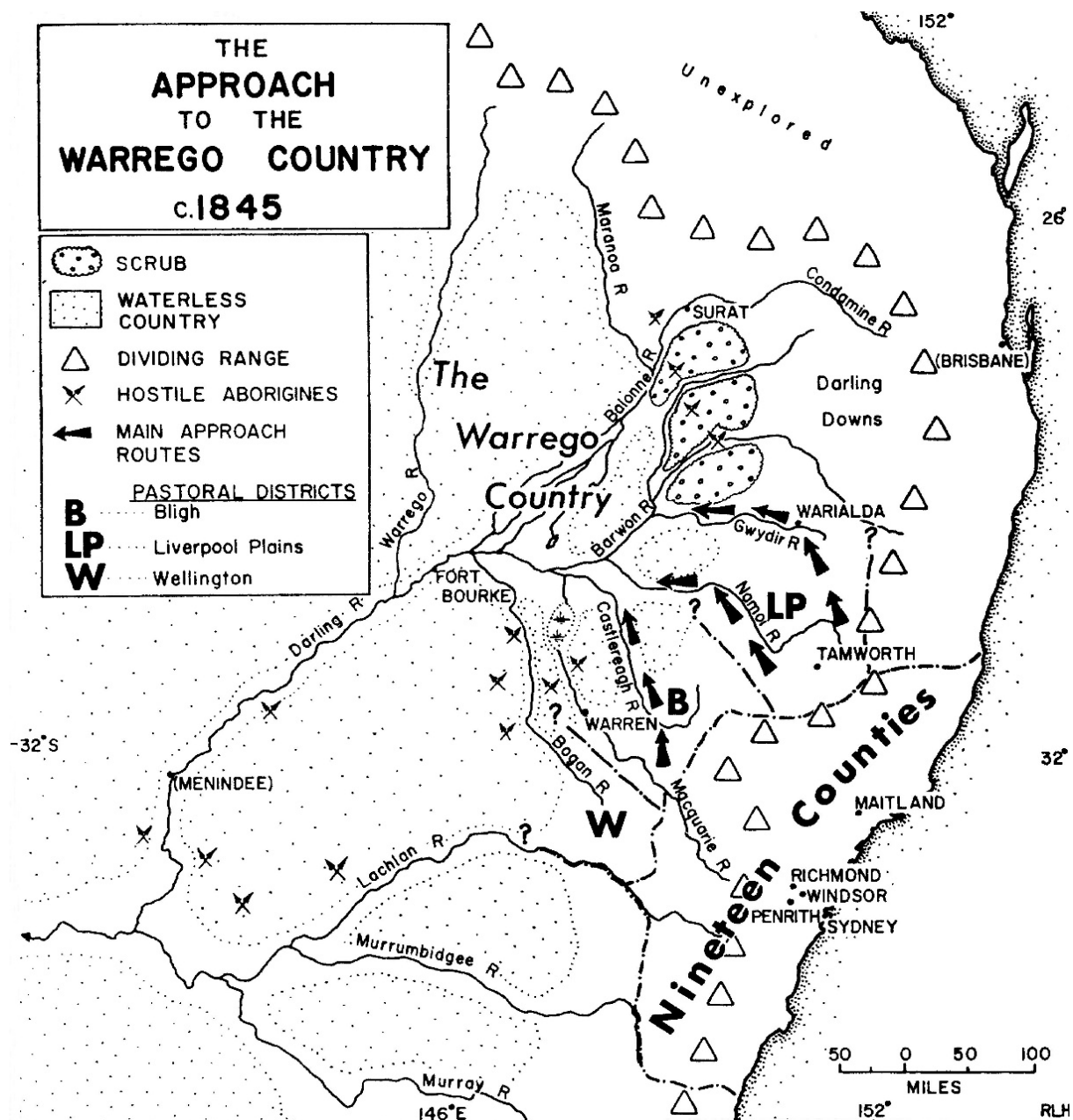
Figure 31 The expansion from the east into the Warrego country of New South Wales in the mid-1840s. Source: RL Heathcote (1965) *Back of Bourke: a study of land appraisal and settlement in semi-arid Australia*, Melbourne, p 37
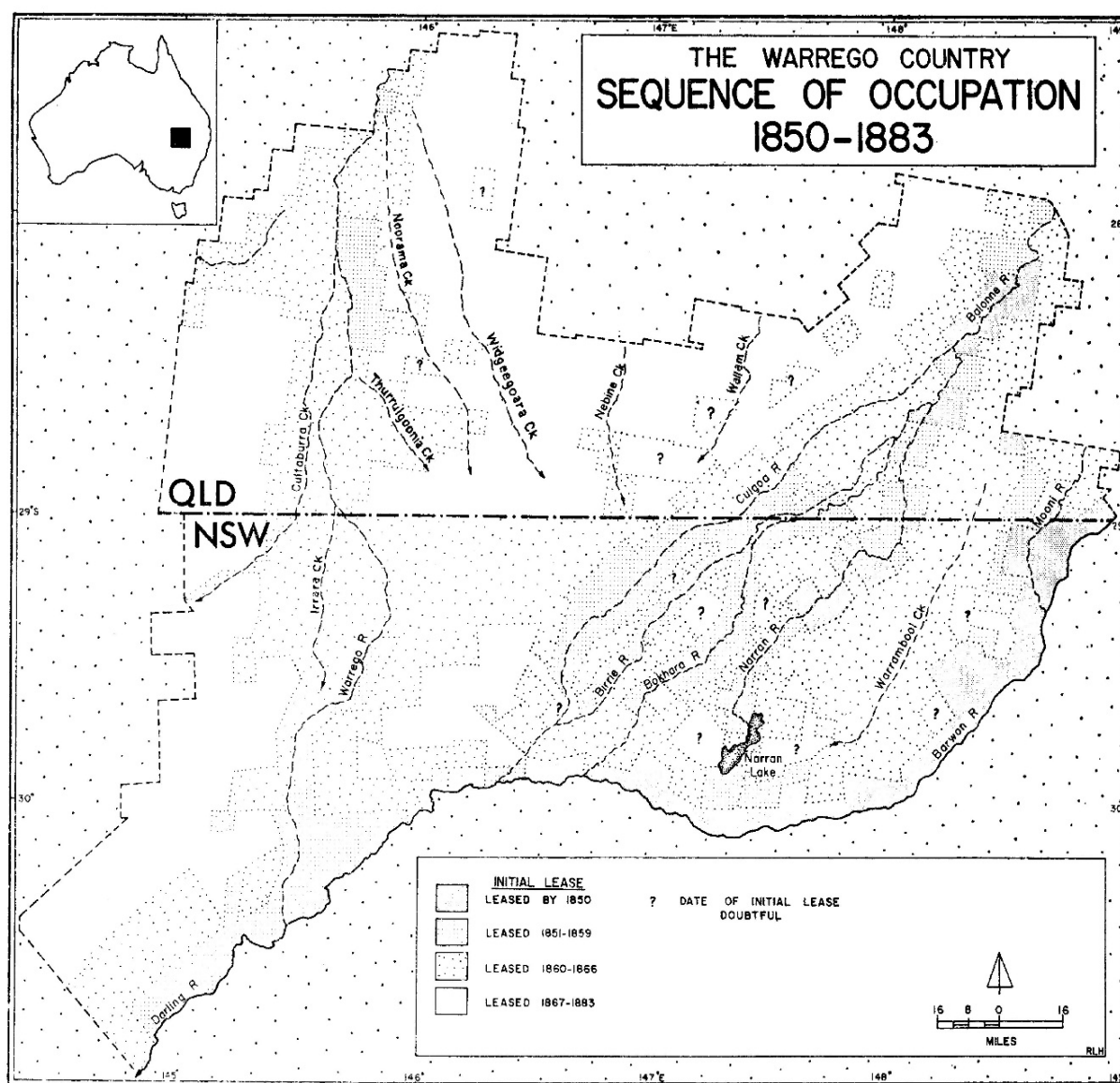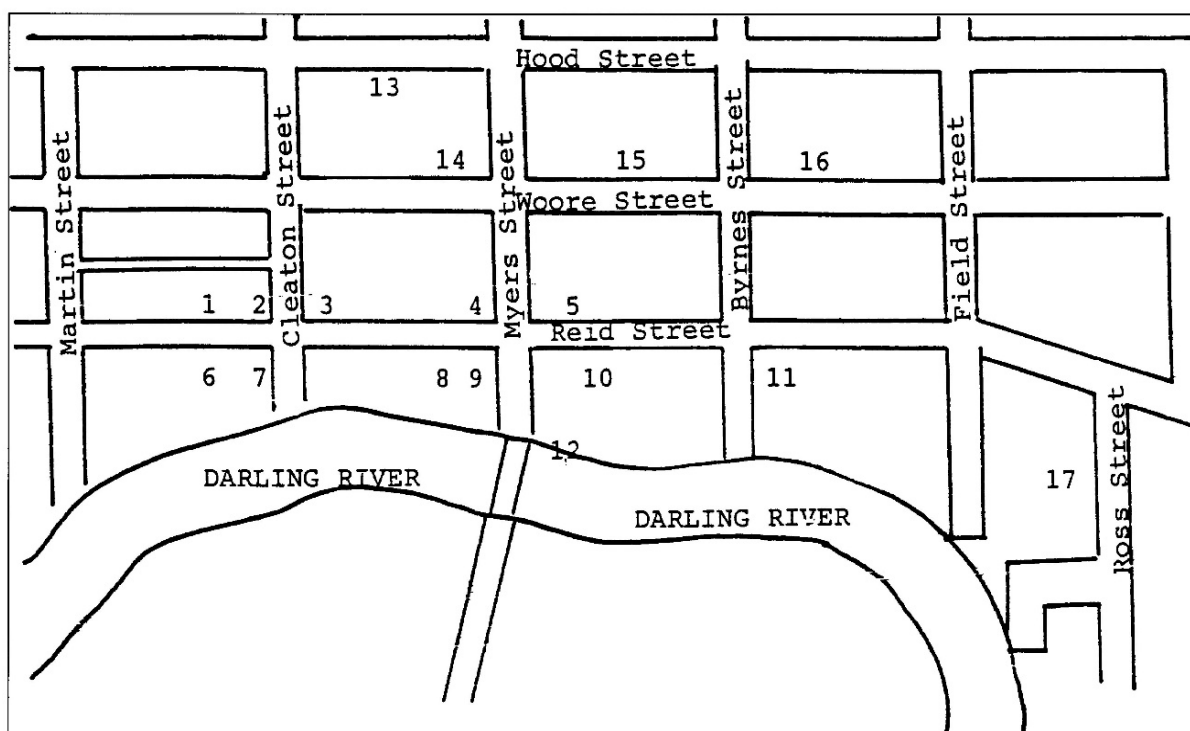
Figure 32 The phases of pastoral settlement in the Warrego Country from 1850 to 1883.
Source: RL Heathcote (1965) *Back of Bourke: a study of land appraisal and settlement in semi-arid Australia*, Melbourne, p 99

Compiler: R Ian Jack.

1. Prison
2. Courthouse and police station
3. Queen's Head Hotel
4. Club Hotel
5. Knox and Downes
6. Rich and Co
7. Court House Hotel (originally Punt Hotel)
8. Custom House
9. Post Office
10. Athenaeum (now Museum)
11. Shire Chambers
12. Wharf
13. Public school
14. St James Church of England
15. Uniting Church
16. Catholic convent
17. Resch's Lion Brewery (now part of golf clubhouse)

Figure 33   **Wilcannia: The relationship of the town's heritage features with the Darling River. Compiler, R Ian Jack**
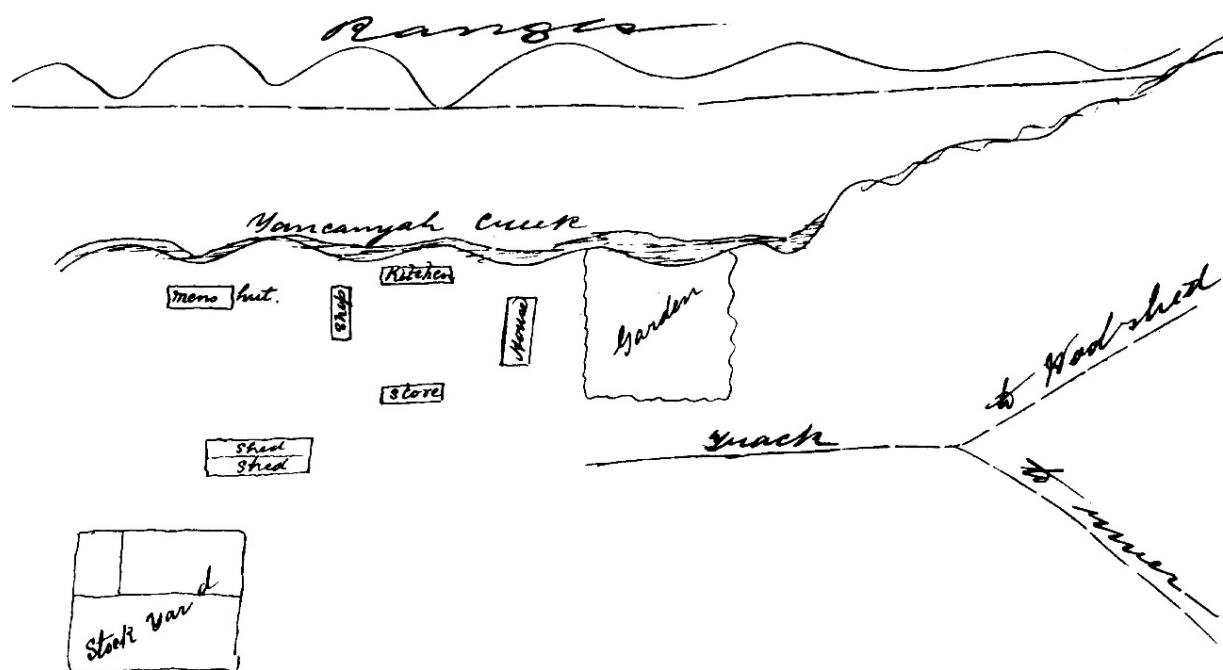
'Torowotto' (Yancannia) homestead layout, 1867
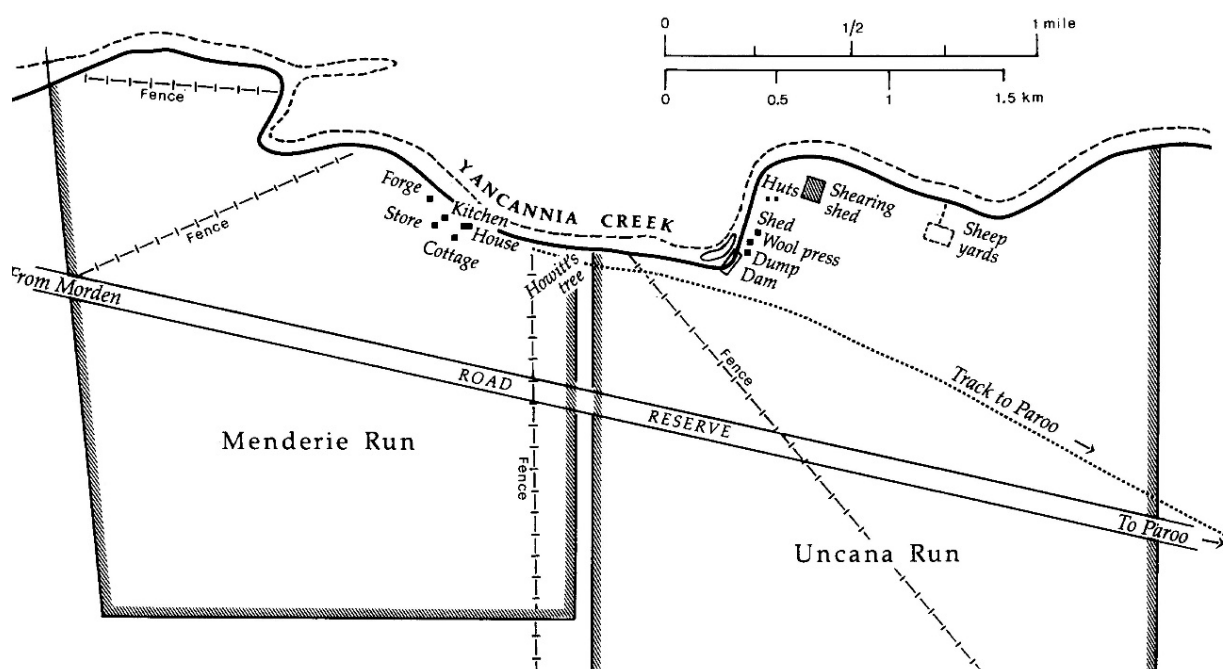
Homestead and woolshed blocks, 1885

Figure 34   Yancannia Homestead Area in 1867 and 1885, showing the development of fencing and wool-processing plant. Source: Mary T Shaw (1987) *Yancannia Creek*, Carlton, pp 45, 129
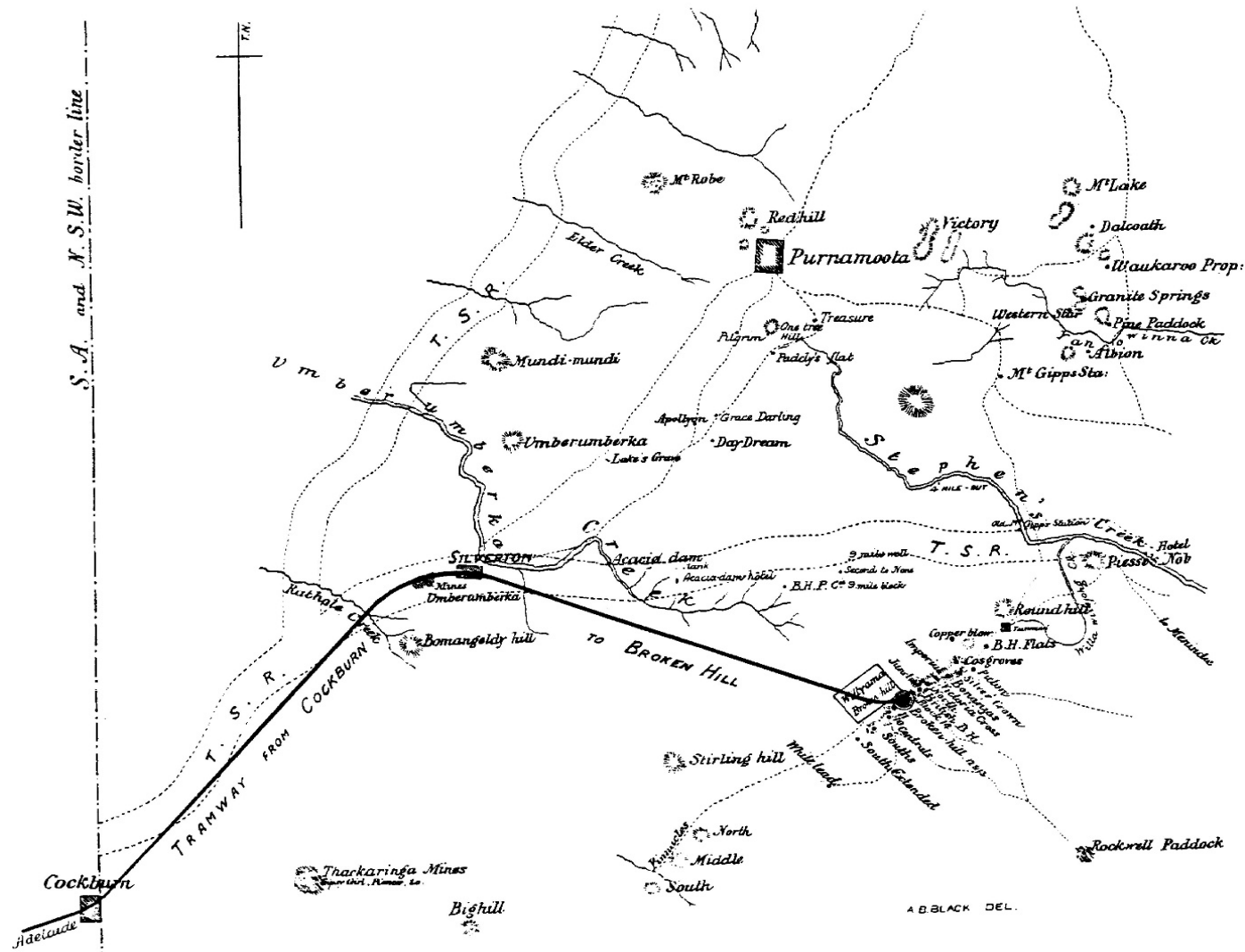
Figure 35 Map of the southern part of the Barrier mining district, drawn by AB Black in 1888. Published in *The Barrier dilver and tin fields* in 1888, Adelaide, 1888

The route to the Mount Browne goldfields, 1881

| 0 | 8 | 16 | 24 | 32 | 40 | 48 miles |

| 0 | 16 | 32 | 48 | 64 | 82 km |
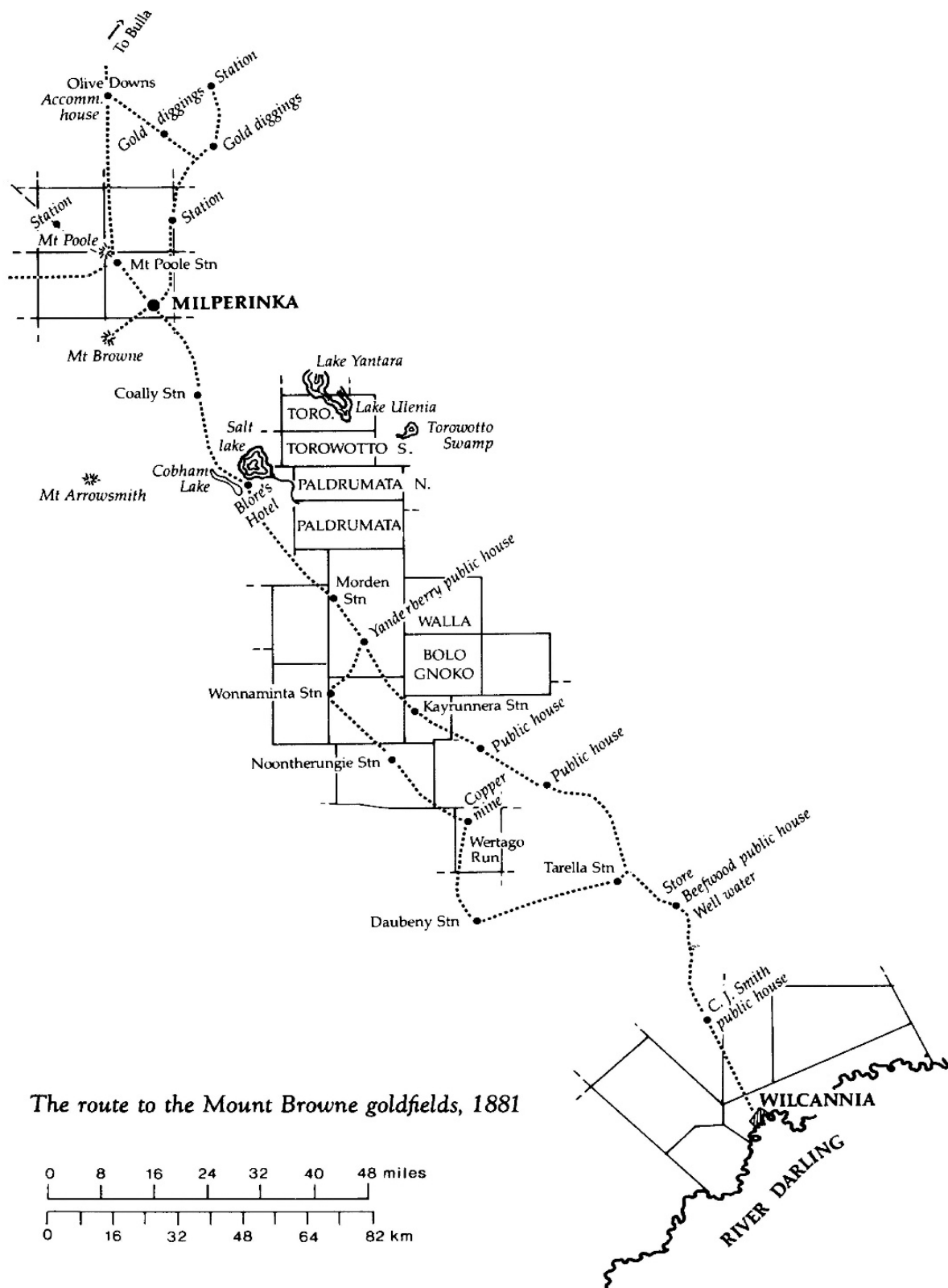
Figure 36   The route from Wilcannia to Milparinka and the Mount Brown and Mount Poole Mines in 1881. Source: Mary T Shaw (1987) *Yancannia Creek***, Carlton, p 97**

CITY OF BROKEN HILL

Map labels:
REGENERATION AREA
N (compass)
TRANS SHIPPING YARDS
BARRIER CENTRAL PTY. LTD.
ZINC CORPORATION LIMITED
BROKEN HILL SOUTH LTD.
WESTERN N.S.W. ELECTRIC POWER
NORTH BROKEN HILL LIMITED
NEW BROKEN HILL CONSOLIDATED LIMITED

Legend:
—— — OCCUPIED AREA – 1886
—·—· MAIN AREA OF OCCUPANCE – 1888
PUBLIC UTILITY RESERVES
PUBLIC REACREATION RESERVES
0 ———— 50 CHAINS

Figure 37   **The growth of Broken Hill, 1886, 1888 and 1953. Source: RJ Solomon (1988)** *The richest ode: Broken Hill, 1883–1988,* **Sydney, p 122**

17. Lord Howe Island

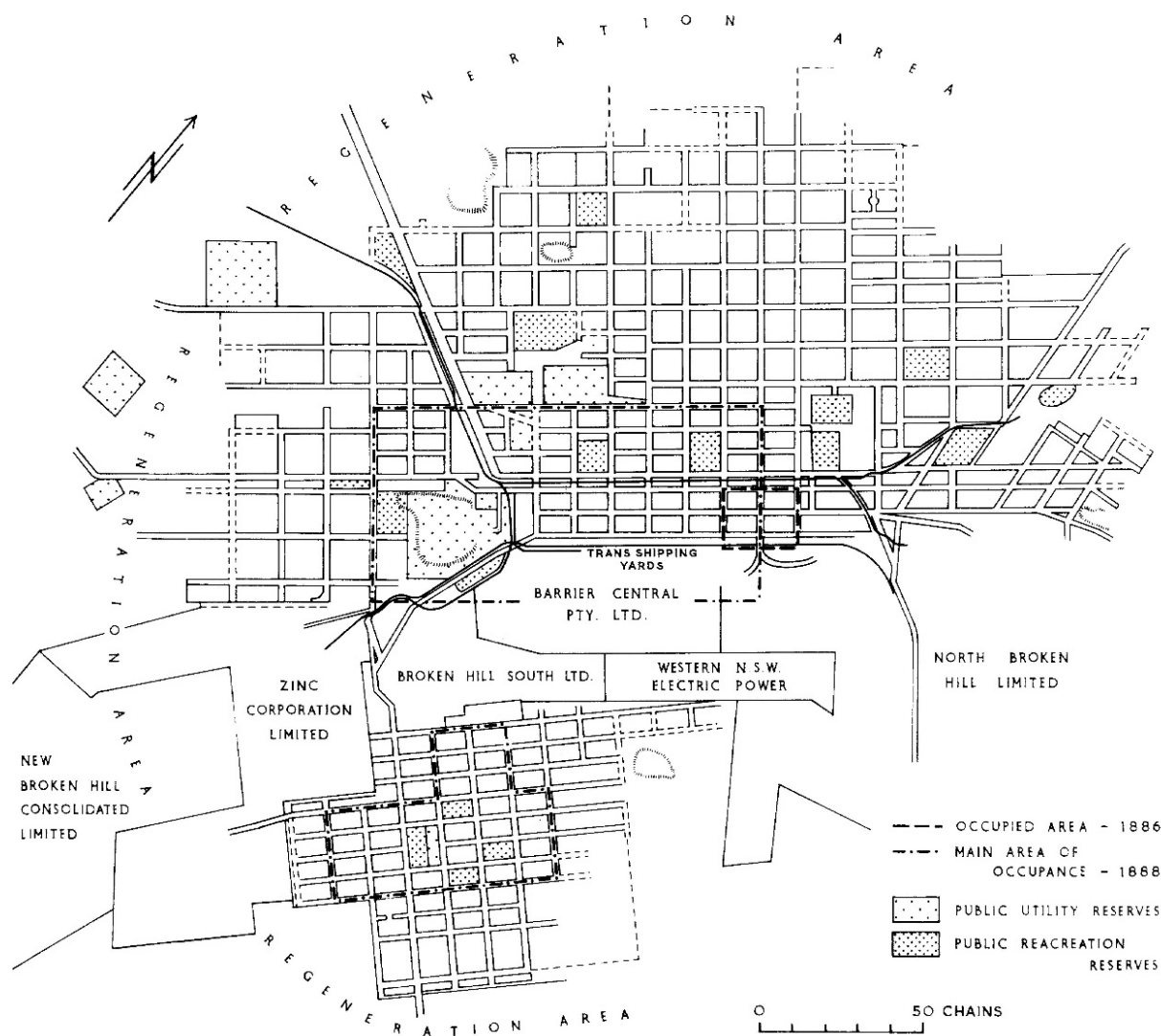Lord Howe Island has many claims to special treatment. It is an anomaly in New South Wales. It lies 5° east of the limit of state jurisdiction and so, alone among the state's islands, it had to be separately designated as part of the state in the Constitution Act of 1855. Its physical structure is remarkable. The bar which protects the lagoon on the western side of the island is the most southerly coral reef in the world and Mount Lidgbird and Mount Gower tower 800 to 900 metres above the lowland. The island was wholly innocent of human contact until 1788: alone among the heritage regions of New South Wales, it has no Aboriginal history nor prehistory. Even its nomenclatures are distinctive: it is the only habitable island in a group of 28 rocky projections from an underwater ridge, but the group is nameless; the various settlements on different parts of the island have never attracted individual names, so that to this day there is no township name. Finally, among its particularities, Lord Howe Island with its adjacent marine environment has been, like the Great Barrier Reef, designated as a World Heritage site by the UNESCO Committee for the Protection of World Cultural and Natural Heritage.

The primary reason for Lord Howe's admission to World Heritage status in 1982 has nothing to do with its history. The 1,455 hectares of subtropical island, 700 kilometres north-east of Sydney, are internationally recognised as having an exceptionally diverse natural beauty and a high proportion of unusual and unique flora and fauna. All that human intervention has done since 1788 is to exterminate endemic species, such as the Island pigeon, the white gallinule and the Island parakeet, and to introduce, wittingly or accidentally, destructive exotic animals such as pigs, goats, rats and cats.

Map 23   **Lord Howe Island region boundary**

First visitors

Lord Howe Island was first sighted within a month of the First Fleet's arrival at New South Wales: Henry Lidgbird Ball, in command of the *Supply*, passed Lord Howe en route to Norfolk Island on 17 February 1788 and on his return journey sent a landing party ashore on 13 March. His log laconically stated: 'sent a boat to examine the isle and found abundance of turtle' (cited in Nicholls 1952:10), but in fact the first steps were taken by his crew towards the extinction of the gallinule and pigeon and the near-extinction of the woodhen as well (Blackburn cited in Rabone 1959).

The birds of Lord Howe were exceptionally easy to catch – even today mutton birds sit placidly unaware of danger – and the marine life, turtles and fish, was also plentiful. Once the misapprehension that fresh water was not available on the island was dispelled, the advantages of Lord Howe as a refuelling spot for shipping became doubly clear. But the doubt over fresh water took several decades to dispel and Lord Howe did not immediately become an established port of call or a source of fresh turtle for Sydney Cove. There was a flurry of activity in May 1788, when 4 of Phillip's fleet were anchored off the island, but in the early nineteenth century the only visitors seem to have been from whaling ships. The first sure information is as late as 1830 when the Hobart whaler, the *George*, was holed on George Rock (off the south-east of Mount Gower) and was beached, probably in Georges Bay to the north. The crew were taken off by a government ship and by another whaler 3 months later in 1831 and the wreck remained behind as the first archaeological evidence of human contact with the island (Nicholls 1952).

The drama of the *George* attracted journalists and the only information about visits to the island in the 1820s comes incidentally from accounts of the shipwreck. By this time, water was well known to be available on the east coast below Mount Lidgbird. The uncertain water supply on the flat part of the island along the lagoon did not entice landings through the coral reef on the west: the early landfalls were in Boat Harbour where fresh water came down from the rainforest. During the 1820s it appears that pigs were released on the island by a whaling captain, perhaps to ensure fresh meat on future visits (Rabone 1959).

First settlement

The first people to inhabit the island were landed from a whaling boat in the winter of 1834. Like other ships, the *Caroline* anchored off the east coast and the 8 settlers were deposited on Blinkenthorpe Beach (named after the master of the *Caroline*). These first settlers numbered 8: 3 Europeans, probably ex-whalers, called Ashdown, Bishop and Chapman, their 3 Māori wives and 2 Māori boys, almost certainly children of the Māori women.

These first settlers established a vegetable garden close to Blinky Beach (just north of the present airstrip around portion 114): there they grew potatoes, carrots, maize, pumpkins and taro (White 1835 cited in Rabone 1959 and Nicholls 1952). This is the earliest cultivated land on the island. But the settlers' huts were on the north-west end, overlooking Hunter Bay, in the sheltered lagoon. Their huts were almost certainly simple

structures made from the palm trees and the hypothesis put forward in the Lord Howe Island Heritage Study of 1984 that they were made partly of brick is not sustainable (Birmingham in Tanner 1984).

The 8 founding settlers eked out a simple existence there for 7 years. They had some transient company during this time: a convict escapee from Hobart along with 2 seamen in 1834–35; the crew of the revenue cutter sent to recapture the convict in 1835; the shipwrecked crew of the *Wolf* for 5 weeks in 1837; some whalers ashore in 1840 to bury their cooper under a slate gravemarker that was still on the island a century later (Rabone 1959). The presence of a settlement clearly attracted ships: 4 are known to have called in December 1839 and at least 10 in 1840 (Nicholls 1952).

Second phase of settlement: servicing the whalers

In 1841 the original 8 settlers left the island, bought out for £700 by 2 Sydney men, one the owner of the Australian Foundry, Richard Dawson (who merely invested in the island), the other a retired Indian Army captain, Owen Poole, who actually took up residence late in 1841 or early in 1842. Poole initially took 3 married couples to the island, primarily to service the visiting ships. In July 1842 Poole brought to the island another married couple, Thomas and Margaret Andrews, from Sydney as 'general servants' on a 12-month contract. Population grew in a variety of ways: a young woman, Johanna Britton, was put ashore on the island as a romantic stowaway in 1843 and was joined by her lover Alan Moseley in the following year. A Sydney medical man, Dr John Foulis, bought half of Poole's share of the island; with his wife and daughter, Foulis came to the island in August 1844, accompanied by the reappointed Andrews and 4 young single men. Dr Foulis established his family home at what is now known as Pinetrees and when he (like Poole) left Lord Howe in 1847, first a whaling captain called Pierce and then in 1848 Thomas and Margaret Andrews took over the land which is still leased by the Andrews' descendants. Foulis had erected 4 huts on the site and there were several cultivated clearings, shown on the map drawn in 1851 from Foulis' memories of 1847 (Figure 38).

The 16 or so settlers were scattered about the northern section of the island. Foulis' sketch map shows 6 buildings behind Old Settlement Beach on Hunter Bay. Captain Middleton and his wife had made 3 clearings behind North Beach, with the eponymous Mount Eliza beyond, and sank a well which is still visible (Nicholls 1952); Alan Moseley and his sweetheart Johanna settled permanently near the very first vegetable garden inland from the north end of Blinky Beach (Figure 39); the Andrews, father, mother and daughter, were at Pinetrees; and the Wrights lived further down on the north bank of Soldier Creek (figures 38, 39). According to Foulis all the huts were 'built of the cabbage tree': the settlers lived by supplying whalers (up to 80 a year, Foulis claimed), 'catching pigs and fish, and growing vegetables and fruits' (Foulis 1853:720). 'All kinds of vegetables', Foulis enthused, 'can be produced in great abundance, potatoes, pumpkins, and other garden provisions are reared twice a year and sometimes oftener from the same ground. Maize and wheat grow well and have yielded large crops as also the sweet potatoes, which seems very well adopted for the more sandy parts. The banana grows luxuriantly and ripens very well; and some vines which I planted on my

arrival on the Island flourished exceedingly well and were producing fruit before l left [in 1847]' (Foulis 1853:719).

There were already many exotic plants: the banana and vine had come from Port Stephen, the potatoes from Hobart: melons, cape gooseberries and mint were brought from Sydney (Macdonald 1853). Wells had been sunk by Foulis; although the shallow natural well on Pinetrees sometimes dried up, the new 5-metre-deep wells sunk into the clayey soil gave permanent sweet water on the main settlement area. Four clay beds were identified by Foulis on his sketch map, one above North Bay, 2 in the centre of the island behind Pinetrees and one down south on Lovers Bay near the Wrights' farm (Figure 38). This clay had not been used for brickmaking by 1847, since Foulis remarks that 'I should consider it well adapted for brickmaking if mixed with a portion of a kind of ferruginous earth which is abundant in the same neighbourhood' (Foulis 1853:720). The brick remains dug up from time to time on the flats behind Old Settlement Beach (if not imported bricks) are therefore likely to be experiments with the local clay conducted after Foulis' time but before abandonment of the Old Settlement area in the 1870s. All eyewitness reports agree that the houses in the 1840s and 1850s were universally constructed from local palm products along with some sawn timber brought from Sydney or cut from cedar wood washed ashore.

The island community grew slowly. In 1853 Nathan Chase Thompson brought 2 women and the runaway daughter of a chief from the Gilbert Islands to Lord Howe, as well as the first mare, and built a house which survives in the north-east area inland from Neds Beach. To confirm the cosmopolitan flavour of the island community, an African-American, Perry Johnson, and his South African wife lived on one hectare in the south, near the Wrights' farm, close to Johnsons Beach, where their drainage ditches are still visible.

The numbers continued to increase by procreation and immigration. By 1869 there were 35 inhabitants, who had added onions of uncommon quality to the goods bartered with the whalers: some onions were also sold direct to Sydney in the 1870s (Nicholls 1952).

Palm seed industry

Whaling declined in the southern oceans in the 1870s. In 1876 when the HMS *Pearl* landed a party, the surgeon reported that 'sometimes six or twelve months pass without a vessel calling at the island. Now this once much frequented and favoured little spot is apparently quite deserted; the old families have lost all zest for cultivation, having to live, as it were, from hand to mouth seeing the fruits of their labour decaying and rotting in the storehouses' (cited in Kelly in Tanner 1984:18).

Although Surgeon Corrie was perhaps too severe in his judgement on the Andrews, Thompsons, Johnsons, Nichols, Wrights and other settlers, the island certainly had a basically subsistence economy between the decline of whaling and the creation of a palm seed trade in the 1880s. Animals had increased in number: there were by 1882 40 cattle, 5 sheep, as well as a single horse, pigs and poultry (Wilson 1882).

In this transitional period, an important administrative change took place. Land tenure on the island had been extremely vague: the quasi-purchase of the island by Poole and

Dawson, for example, in 1841, was a purely private arrangement between them and the existing squatters. The superintendent of the Trigonometrical Survey complained in 1882 that:

> leases of small areas, ranging from about 1 acre to 11 acres, have been granted under the 38th section of the Crown Lands Occupation Act of 1875; in many cases the homestead only is included in this area. Other small patches in the vicinity have been cleared and brought under cultivation, the occupants having no legal claim whatever to the land; and the consequences are, that disputes occur as to the limits of the assumed individual rights, only acquired by acts of occupation (Conder to Wilson 1882:1469).

In 1878 the New South Wales Government declared the island a Forest Reserve and sent Captain Armstrong there as a sort of Pooh Bah: Armstrong was Forest Ranger, Registrar, Postmaster, Resident Magistrate and Clerk of Petty Sessions (Rabone 1959). During Armstrong's 4-year term on the island a number of significant steps were taken which led gradually, after Armstrong's time, to large changes in the island community and economy. The first school on the island was started in 1879. The passage into the lagoon was greatly improved in 1880 by the dynamiting of the rocks in the north entrance: lighters going to steamers anchored briefly outside the reef became a more regular way of sea communication. Armstrong encouraged the exploitation of the trees of the island, sending fibre to the mainland, using fibre for packing fruit and selling the first seeds of the Kentia palm to a visiting ship in 1881. It was later alleged that Armstrong and his New Caledonian assistants had cut down about 40 palms and pandanus trees to obtain their seeds for Creswell, the Sydney seedsman (Duff to Wilson 1882): certainly some palm trees were chopped down in Armstrong's time and after his dismissal the island was declared a Botanic Reserve in 1883.

Over the next 20 years, as the palm court culture took root in Europe and Australia, islanders increasingly competed to sell palm seeds to Sydney nurseries, without destroying the trees. In 1907 the 47 islanders laid aside their competitiveness to form the Kentia Palm Seed and Plant Co-operative Co Ltd: by 1911, 28 islanders were shareholders in this company, exporting all over the world.

The Board of Control

The Royal Commissions of 1911–12 acknowledged the signal importance of the seed industry (and, as a corollary, of the preservation of the trees): the decision was made to remove the industry from private ownership and to set up in 1913 the Lord Howe Island Board of Control 'to take charge of the island and trade thereof'. An unforeseen and regrettable corollary proved to be the clearing of more land for grazing by islanders whose incentive to tend palms had been eroded (Lord Howe Island Survey 1985).

The creation of the Board also changed the system of landholding. The Board was 'vested with a permissive occupancy of the whole island' and 'all previously existing permissive occupancies of such land shall be cancelled' (NSW Govt Gazette 1913). The problem of equitable control over landholding on the island, among categories such as old-established residents, non-resident heirs of island folk and outright foreigners, holding or seeking special leases, residential leases, permissive occupancies or leases in perpetuity was intransigent (Kelly in Tanner 1984).

The developments on the island during the 8 years of Board control are in many ways characteristic of more conventional local government on the mainland, with the addition of the administration of the school from 1902 until 1922. By 1914 there were 43 children on Lord Howe, almost half the total population. The prosperity which all this reflected did not, however, endure. Problems began locally with an invasion of rats after the *Makambo* went aground at Neds Beach in 1918: these rats bred enthusiastically and did harm to the island economy. The rat infestation coincided with a sharply declining demand for palm trees in the postwar world, so the island's basic source of revenue was attacked on all fronts. The rats also wreaked havoc on the unique fauna of Lord Howe, killing off 5 species of birds within a few years. The attempt to control rat numbers by importing owls was unhappy, since the owls enjoyed a tasty small bird as much as the rats. The dimension of the problem remained large into the 1930s and the highest number of rat tails presented for the bounty was 27,500 in 1932. There was, however, a positive gain, for in 1930 all birds on the island, whether native or migrant, were given official protection.

Tourism

The revival of the island's fortunes came after the Second World War, from a renewed market for palm trees on the one hand and from tourism on the other. Lord Howe has obvious attractions for tourists, with its equable climate, varied scenery, exotic flora and fauna, beaches, coral reef and lagoon, with excellent fishing grounds around and the remarkable spectacle of Balls Pyramid only 16 kilometres away. But access by sea has always been undependable, since there is no deep- water harbour and seas are often rough; boats have never been frequent and the whalers a century and a half ago visited in greater number than any boats since. There was therefore a problem about developing a tourist industry. The regular sailings of the Burns Philp steamers *Marinda* and *Wanganella* in the 1920s and 1930s brought a large number of daytrippers, rowed ashore through the lagoon in small boats while the steamer hove to outside the reef. Only a small minority stayed in the expectation of returning to Sydney on the next boat, which might not be able to anchor in the treacherous seas. For this minority, however, 2 guesthouses were developed, one at Pinetrees (the original Foulis-Andrews property), the other at Ocean View (farther north, between Neds Beach and the lagoon, run by Gower Wilson, the son of the first schoolmaster and the grandson of Nathan Thompson).

The market for residential accommodation remained restricted until air travel to the island became possible in 1947. For 27 years, from 1947 until 1974, flying boats left from Rose Bay in Sydney Harbour and touched down in the Lord Howe lagoon. It was an unforgettable and magical experience for those of us lucky enough to have taken the 4-hour flight in the old Sandringhams. The service opened up Lord Howe to ordinary tourism and the island developed facilities to meet the new demands. A 9-hole golf course was created near the land once farmed by the Wrights north of Soldier Creek in sporting terrain which is often swampy: local rule 32/3 deals with the special hazard of balls 'lost in mud'. New tourist lodges such as Blue Lagoon, Beachcomber Lodge and Seabreeze Lodge opened and holiday flats were built at Leanda Lei, Pacific Palms, Trader Nick's and the Broken Banyan. During the last decade of the flying boats, the

number of visitors each year increased from 3,000 to over 4,400, the number of islanders exceeded 250 and vehicles became common, although always overshadowed by the ubiquitous bicycles hired by tourists.

The uncertainty created by the obsolescence of the Sandringhams was removed by the contentious decision to build an airstrip across the narrowest part of the island abutting Blinky Beach. The small aircraft using this runway have ensured continuing tourist revenue, spread among a fairly stable number of residents. Road maintenance, waste disposal and vehicle pollution remain substantial problems, since the island is a fragile resource. But the tourist capacity is tightly defined and controlled by the reconstituted Lord Howe Island Board, by the Island Building Code of 1977 and by the recent Lord Howe Island Regional Environmental Plan, while the Lord Howe Island Permanent Park Preserve created in 1981 protects for posterity the uninhabited hilly country to the north and the south, along with the circumambient isles.

Conclusion

In a short history of human contact, Lord Howe Island has passed through 4 main phases. It started as an uninhabited, casual port of call for government ships, traders and whalers, seeking fresh food and water. From the 1830s onwards it became a small subsistence community of islanders who bartered vegetables and meat for trade goods to an increasing number of whalers. As whaling declined in the southern seas in the 1860s and 1870s, the island went into recession, but was jolted out of this by New South Wales government intervention, by the growth of scientific interest and, most of all, by the international market for exotic palms. Like whaling, palm trees also failed, but in the 1920s and 1930s the regular supply steamers from Sydney brought day tourists and a small number of longer-term holidaymakers, who were housed in 2 guesthouses. The introduction of air travel after 1947 and a renewed market for palms have combined to bring a new period of prosperity to the island, with the attendant problems of over-straining critically important natural resources.
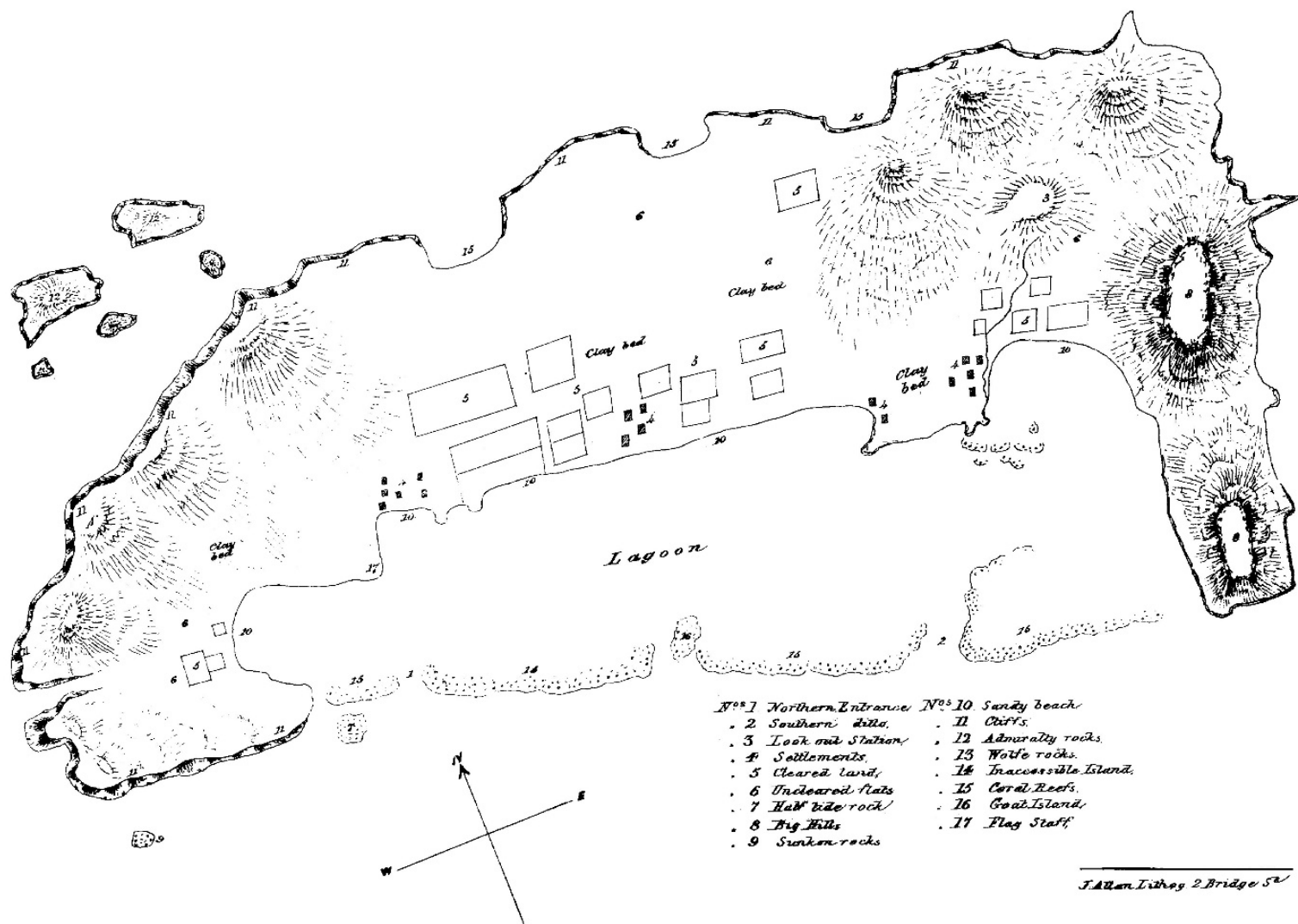
Figure 38 Sketch map of Lord Howe Island made in 1851 by Dr J Foulis, resident on the island from 1844 to 1847.Seventeen huts are shown in 4 locations along the lagoon. Twenty-one clearings are also shown. Source: *Votes and proceedings* (1853) Legislative Council New South Wales
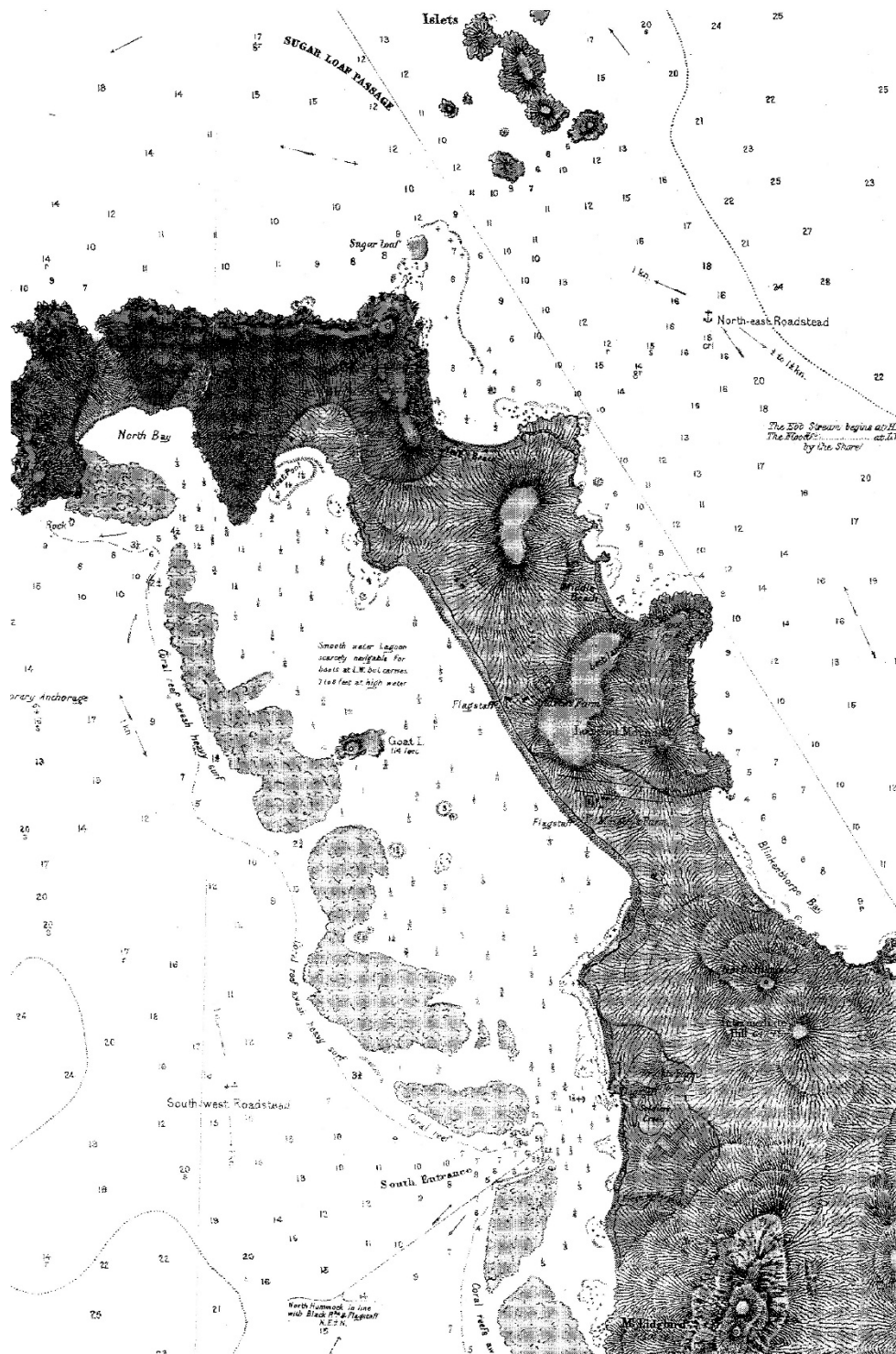
Figure 39   **Map of Lord Howe Island in 1882, showing the inhabited sections. Huts are shown as small black squares, clearings as open rectangles. Three farms are named: from north to south, Andrews', Moseley's and Wright's. No habitation is shown on Old Settlement Beach in the north. Source:** *Votes and proceedings* **(1882) Legislative Assembly New South Wales**

Appendix A

Folio of historical maps

A folio of historical maps was compiled during preparation of the draft *Historical guidelines*. The contents of the folio are set out (with sources) below. The maps show the expansion of towns, roads, railways and other features of settlement as the colony of New South Wales expanded, and indeed their purpose was mainly in location and direction finding. Except by inference, they do not show the spread of actual settlement. Pastoral settlement was way ahead of the construction of a settled landscape, and the maps are not land-use maps, so that the spread of wheat-growing, dairying and other activities cannot be read from them. Readers are advised for these facts to direct their attention to the regional histories and *The historical geography of NSW to 1901* by DN Jeans (Longman 1972). The evolution of landscape in detail is dealt with in *The open air museum* by DN Jeans and P Spearritt (Allen and Unwin 1982). The maps are general indicators of regional spread and intensification.

The first map, Sydney Cove in July 1788 may chiefly be of archaeological interest, showing the former boundaries of land and water, the disposition of early buildings, and an incipient street layout never realised, though the beginnings of George Street are apparent. The source of the lower Tank Stream is shown.

Grimes's map of 1796 shows the location of Sydney in relation to scattered patches of land grants to named individuals, in which the importance of the Parramatta area for early agriculture and the settlement at Mulgrave Plains (Windsor) are apparent. A road already leads from Parramatta to Windsor, although boat traffic via the Hawkesbury is also important.

Flinders's map of Australia in 1814 marks an early use of the names, and shows coastal discoveries. Flinders has added the knowledge of the Lachlan and Macquarie rivers as found by Evans and Oxley in this edition of 1820. The map is thus significant in showing early knowledge of the interior geography of New South Wales, sketchy as it was.

In 1814 a map of the County of Cumberland was made. Settlement in the Illawarra and the penal station at Newcastle are not shown. The location of settled land is shown, together with government reserves. The map reinforces TM Perry's theory that by 1813 the land within the County of Cumberland was taken up, and that this was a major impetus to the transmontane journey of Lawson, Blaxland and Wentworth. Commons have been made for the outlying settlements. District names are shown.

The County of Cumberland is shown again in a map of 1820, together with the northern Illawarra, connected by road or track to Appin. Landforms, drainage, towns and roads are shown. Richmond, Windsor, Wilberforce and Pitt Town are shown as clusters of buildings, from which it can be inferred that Macquarie's Hawkesbury towns had been occupied. No such settlements are shown at Campbell Town and Appin.

The horizon broadens with the map of 1825 which shows the great expansion of knowledge with the opening to settlement of the outlying districts and the free immigration of the 1820s. The routes of explorers are shown, notably those of John Oxley, Henry Lawson and James Meehan. From this map can be drawn much useful information about the original vegetation of the country and settlers' perceptions of its worth. Urban development outside the County of Cumberland is restricted to Bathurst and Newcastle, but the unofficial town of West Maitland is also marked.

Mitchell's map of the Settled Districts in 1834 includes the land inside the Limits of Location drawn in 1829 and was drawn to emphasise natural features which might serve to divide the area into counties and parishes. It therefore shows little detail of settlement, and is a topographic map based on his triangulation system. The Great South Road and the Great West Road are shown, but not his Great North Road then under construction.

Dixon's map of 1837 is much more informative than Mitchell's, relegating topography to the background, and showing alienated land from which the chief centres of settlement can be inferred. This is a guide to the estates of the gentry within the settled districts, including also the estates of the Australian Agricultural Company on Liverpool Plains. Roads and towns are shown. Since this is a map of the settled districts within the Limits of Location, the areas of squatting settlement beyond, where no surveyors worked, is not shown. The location of squatters might be calculated from the licences issued in 1836 (see Jeans op. cit.).

The next map shows New South Wales in 1850, extending into what became Queensland in 1859. Roads and postal stations are shown, most of the latter being towns or incipient towns. The map is useful in showing routes then in use, but later abandoned, as with the line from Armidale to Grafton. This map shows how far settled life had extended in the pastoral period up to 1850.

A general map of Australia shows the colonial divisions in 1851, and in a generalised way the main towns and drainage systems. Towns in New South Wales, such as Bona Bona are shown which are not known to have existed, so that the map is not reliable for internal use. It does not show the gold discoveries of that year.

Comparison of the 1858 map with that of 1850 shows the gold discoveries and the extensive development of the urban and road systems consequent upon a shift of the population inland. Patterns of settlement have also intensified in the area with a settled population by 1850. The development of the north-west Darling Plain region is particularly apparent.

The map of 1871 shows a significant advance into western New South Wales with the riverboat traffic which began to use the Murray and Darling rivers in the 1850s. The new pastoral technology of ranks, wells and fencing also allowed the land to be occupied in this semi-arid region under the stimulus of high wool prices. The urban system is intensifying, due in some places to the operation of the Free Selection Acts of 1861, as in the lower reaches of the North Coast region.

By 1883, construction of the railway trunk network is well advanced, though the line to Bourke was not completed until 1885. The rail system was designed to draw the traffic of outlying regions to Sydney, in the face of competition from Melbourne, Adelaide and the riverboats. New mining centres, such as Cobar, Tibooburra and Mount Hope have appeared, and the chief river ports can be identified. Agriculture is spreading in the eastern Riverina, and a dense urban pattern appearing, and similarly in the central west. This map is reproduced at the largest size of photocopy supplied by the Mitchell Library, and a magnifying glass is recommended for reading this and some subsequent maps.

The 1891 map shows districts for land administration, and headquarters towns some of which, like Moree, still contain handsome Lands Offices from this period. The Lands function helped to make these towns into regional centres. The railway system has been further extended to serve new wheat areas, and a general intensification of settlement is apparent, including the survival of towns like Hill End and Sofala from the height of their mining significance.

ln 1902 the basic pattern of towns and roads is well-established. Few new additions follow; subsequent maps record the emergence of more railways (until the 1930s), a main road system, and an urban hierarchy. Particular attention may be drawn to the 4-sheet (a, b, c, d) map of 1933 which shows the country in great detail, including tracks and tanks and wells, and the similarly detailed map of 1963. Both of these should make ideal reference maps for the identification and investigation of the detailed topography of each region, including many smaller settlements which have since disappeared. Counties are shown on the 1943 map, a unit of survey rather than local government.

Contents of the folio of historical maps of New South Wales

1788 Sketch of Sydney Cove, Port Jackson in the County of Cumberland New South Wales. July. Central Mapping Authority Reproduction.

1796 Plan of the Settlements in New South Wales by C Grimes.

1814 General Chart of Terra Australia or Australia shewing the parts explored between 1798 and 1803. Corrected to 1822. M Flinders. Reprinted by the Central Mapping Authority of New South Wales.

1814 Plan of the Allotments of Ground alienated from the Crown in New South Wales. J Burr and G Ballisat.

1820 An Outline Map of the Settlements in New South Wales. Quarter Master General's Office, London. Lands Department, Sydney.

1825 A Map of New South Wales from the best authorities and from the latest discoveries. London. (Reproduced by the Central Mapping Authority.)

1834 Map of the Colony of New South Wales. TL Mitchell. (Reproduced by the Central Mapping Authority.)

1837 Map of the Colony of New South Wales. Robert Dixon. (Reproduced by the Central Mapping Authority.)

1850 Map shewing the roads in New South Wales prepared for the use of the post office department. Mitchell Library.

1851 Australia. J Tallis. London. (Reproduced by Sunmap Centre, Brisbane.)

1858 Road map of the Colony of New South Wales, shewing the lines of communication by the main and other roads, the railways, rivers, and telegraphic lines. Mitchell Library.

1871 Road and distance map of New South Wales. Gibbs and Shallard. Sydney. Mitchell Library.

1883 Map shewing the postal stations, railways and roads, New South Wales. From the latest government maps and revised from official documents. Mitchell Library.

1891 Map of New South Wales shewing all divisions for the purposes of the Crown Lands Acts. Mitchell Library.

1902 Pearson's cyclists' and travellers' district road map of New South Wales (with insets). Mitchell Library.

1910 New South Wales. Mitchell Library.

1921 Pearson's cyclists' and travellers' district road map of New South Wales (with insets). Mitchell Library.

1930 Road Map of New South Wales. HEC Robinson. Sydney. Mitchell Library.

1933 New South Wales, including Lord Howe Island. Lands Department, Sydney. (4 sheets.)

1943 Diagram map of New South Wales. Lands Department, Sydney.

1959 New South Wales, showing main roads system. (2 sheets.) Department of Geography, University of Sydney.

1963 New South Wales, showing main roads system. (2 sheets.) Department of Geography, University of Sydney.

1971 New South Wales. Classification of main roads with shire and municipal boundaries. Department of Geography, University of Sydney.

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